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ATIONAL EDUCATIONAL ASSOCIATION

JOURNAL

OF

CEEDINGS AND ADDRESSES

OF THE

THIRTY-SIXTH ANNUAL MEETING

HELD AT

MILWAUKEE, WIS., JULY 6-9, 1897

PUBLISHED BY THE ASSOCIATION

CHICAGO

The University of Chicago Press

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CONSTITUTION

OF THE

NATIONAL EDUCATIONAL ASSOCIATION.

PREAMBLE.

To elevate the character and advance the interests of the profession of teaching, and to promote the cause of popular education in the United States, we, whose names are subjoined, agree to adopt the following

CONSTITUTION.

ARTICLE I.—NAME.

This association shall be styled the NATIONAL EDUCATIONAL ASSOCIATION.

ARTICLE II.—DEPARTMENTS.

Section 1. It shall consist of seventeen departments: First, of School Superintendence; second, of Normal Schools; third, of Elementary Schools; fourth, of Higher Education; fifth, of Industrial Education; sixth, of Art Education; seventh, of Kindergarten Instruction; eighth, of Music Education; ninth, of Secondary Education; tenth, of Business Education; eleventh, of Child Study; twelfth, of Physical Education; thirteenth, of Natural Science Instruction; fourteenth, of School Administration; fifteenth, the Library Department; sixteenth, for the Education of the Deaf, Blind, and Minded; and seventeenth, the National Council of Education.

Section 2. Other departments may be organized in the manner prescribed in this constitution.

ARTICLE III.—MEMBERSHIP.

Section 1. There shall be three classes of members, namely, active, associate, and corresponding.

Section 2. Teachers and all who are actively associated with the management of educational institutions, including libraries and periodicals, may become active members. Teachers who pay an annual membership fee of two dollars may become associate members. Eminent educators not residing in America may be elected by the Directory as corresponding members. The number of corresponding members shall at no time exceed fifty.

Section 3. Any person eligible may become an active member upon application indorsed by three active members, and the payment of an enrollment fee of two dollars and the dues for the current year.

All active members must pay annual dues of two dollars, and will be entitled to the volume of proceedings without "coupon" or other conditions. If the annual dues are not paid within the fiscal year, membership will lapse, and may be restored only on payment of the enrollment fee of two dollars and the annual dues for the current year. All life members and life directors shall be denominated active members, and shall enjoy all the powers and privileges of such members without the payment of annual dues.

Associate members may receive the volume of proceedings in accordance with the usual "coupon" conditions, as printed on the membership certificate.

Corresponding members will be entitled to the volume of proceedings without the payment of fees or other conditions.

Sec. 4. The names of active and corresponding members only will be printed in the volume of proceedings, with their respective educational titles, offices, and addresses, the list to be revised annually by the Secretary of the association.

ARTICLE IV.—OFFICERS.

Section 1. The officers of this association shall consist of a President, twelve Vice-Presidents, a Secretary, a Treasurer, a Board of Directors, a Board of Trustees, and an Executive Committee, as hereinafter provided.

Sec. 2. The Board of Directors shall consist of the President of the National Educational Association, First Vice-President, Secretary, Treasurer, Chairman of the Board of Trustees, and one additional member from each state, territory, or district, to be elected by the association for the term of one year, or until their successors are chosen, and of such life directors as are in office.

All past presidents of the association now living, and all future presidents at the close of their respective terms of office, and the United States Commissioner of Education shall be life directors of the association. The President of the National Educational Association, First Vice-President, Secretary, Treasurer, and Chairman of the Board of Trustees shall constitute the Executive Committee.

Sec. 3. The elective officers of the association shall be chosen by the active members of the association by ballot, unless otherwise ordered, on the third day of each annual session, a majority of the votes cast being necessary for a choice. They shall continue in office until the close of the annual session subsequent to their election, and until their successors are chosen, except as hereinafter provided.

Sec. 4. Each department shall be administered by a President, Vice-President, Secretary, and such other officers as it shall deem necessary to conduct its affairs; but no person shall be elected to any office of the association, or of any department, who is not, at the time of the election, an active member of the association.

Sec. 5. The President shall preside at all meetings of the association and of the Board of Directors, and shall perform the duties usually devolving upon a presiding officer. In his absence, the first vice-president in order who is present shall preside; and in the absence of all vice-presidents a *pro-tempore* chairman shall be appointed on nomination, the Secretary putting the question.

Sec. 6. The Secretary shall keep a full and accurate report of the proceedings of the general meetings of the association and all meetings of the Board of Directors, and shall conduct such correspondence as the directors may assign, and shall have his records present at all meetings of the association and of the Board of Directors. The secretary of each department shall, in addition to performing the duties usually pertaining to his office, keep a list of the members of his department.

Sec. 7. The Treasurer shall receive, and under the direction of the Board of Trustees hold in safe-keeping, all moneys paid to the association; shall expend the same only upon the order of said board; shall keep an exact account of his receipts and expendi-

tures, with vouchers for the latter, which accounts, ending the 1st day of July each year, he shall render to the Board of Trustees, and, when approved by said board, he shall report the same to the Board of Directors. The Treasurer shall give such bond for the faithful discharge of his duties as may be required by the Board of Trustees; and he shall continue in office until the first meeting of the Board of Directors held prior to the annual meeting of the association next succeeding that for which he is elected.

Sec. 8. The Board of Directors shall have power to fill all vacancies in their own body; shall have in charge the general interests of the association, excepting those herein intrusted to the Board of Trustees; shall make all necessary arrangements for its meetings, and shall do all in its power to make it a useful and honorable institution. Upon the written application of twenty active members of the association for permission to establish a new department, they may grant such permission. Such new department shall in all respects be entitled to the same rights and privileges as the others. The formation of such department shall in effect be a sufficient amendment to this constitution for the insertion of its name in Article II., and the Secretary shall make the necessary alterations.

Sec. 9. The Board of Trustees shall consist of four members, elected by the Board of Directors for the term of four years, and the President of the association, who shall be a member *ex officio* during his term of office. At the election of the trustees in 1886, one trustee shall be elected for one year, one for two years, one for three years, and one for four years; and annually thereafter, at the first meeting of the Board of Directors held prior to the annual meeting of the association, one trustee shall be elected for the term of four years. All vacancies occurring in said Board of Trustees, whether by resignation or otherwise, shall be filled by the Board of Directors for the unexpired term; and the absence of a trustee from two successive annual meetings of the board shall forfeit his membership therein. The Board of Trustees thus elected shall constitute the body corporate of the association, as provided in the certificate of incorporation under the provisions of the Act of General Incorporation, Class Third, of the Revised Statutes of the District of Columbia, dated the 24th day of February, 1886, at Washington, D. C., and recorded in Liber No. 4, "Acts of Incorporation for the District of Columbia."

Sec. 10. It shall be the duty of the Board of Trustees to provide for safe-keeping and investment of all funds which the association may receive from donations; and the income of such invested funds shall be used exclusively in paying the cost of publishing the annual volume of proceedings of the association, excepting when donors shall specify otherwise. It shall also be the duty of the board to issue orders on the Treasurer for the payment of all bills approved by the Board of Directors, or by the President and Secretary of the association acting under the authority of the Board of Directors; and, when practicable, the trustees shall invest all surplus funds exceeding one hundred dollars that shall remain in the hands of the Treasurer after paying the expenses of the association for the previous year.

ARTICLE V.—MEETINGS.

Section 1. The annual meeting of the association shall be held at such time and place as shall be determined by the Board of Directors.

Sec. 2. Special meetings may be called by the President at the request of five directors.

Sec. 3. Any department of the association may hold a special meeting at such time and place as by its own regulations it shall appoint.

Sec. 4. The Board of Directors shall hold its regular meetings at the place and not less than two hours before the assembling of the association.

Sec. 5. Special meetings may be held at such other times and places as the board or the President shall determine.

Sec. 6. Each new board shall organize at the session of its election. At its first meeting a committee on publication shall be appointed, which shall consist of the President and the Secretary of the association for the previous year, and one member from each department.

ARTICLE VI.—BY-LAWS.

By-laws not inconsistent with this constitution may be adopted by a two-thirds vote of the association.

ARTICLE VII.—AMENDMENTS.

This constitution may be altered or amended at a regular meeting by the unanimous vote of the members present; or by a two-thirds vote of the members present, provided that the alteration or amendment has been substantially proposed in writing at a previous meeting.

BY-LAWS.

1. At the first session of each annual meeting of the association there shall be appointed by the President a committee on resolutions; and at the third session of such meeting there shall be appointed a committee on nominations, consisting of one member from each state represented, the same to be appointed by the President on the nomination of a majority of the active members in attendance from such state; provided, however, that such appointment shall be made by the President without such nomination, when less than three active members from a state are in attendance, and also when a majority of the active members in attendance from any one state shall fail to make a nomination. The meeting of active members to nominate members of the nominating committee shall be held at 2 P. M. on the second day of the meeting, at such place as shall be announced in the general programme.

2. The President and Secretary shall certify to the Board of Trustees all bills approved by the Board of Directors.

3. Each paying member of the association shall be entitled to a copy of its proceedings.

4. No paper, lecture, or address shall be read before the association or any of its departments in the absence of its author, nor shall any such paper, lecture, or address be published in the volume of proceedings without the consent of the association, upon approval of the Executive Committee.

5. It shall be the duty of the President, Secretary, and Treasurer of the association to appoint annually some competent person to examine the securities of the Permanent Fund held by the Board of Trustees, and his certificate, showing the condition of the said fund, shall be attached to the report of the Board of Trustees.

ADOPTED BY THE BOARD OF DIRECTORS.

The establishment of a special fund from surplus receipts, after the expenses of the association have been paid, to be known as the "Emergency Fund," was recommended by the Board of Trustees, submitted to the Board of Directors at Saratoga Springs, N. Y., July 12, 1892, and the following resolution was adopted:

Resolved, That there be established, as soon as the current expenses of the association will warrant, an Emergency Fund not to exceed \$4,000. Said fund shall be subject to expenditure by the Board of Trustees in accordance with votes of the Board of Direct-

ors at any regularly called meeting. The said fund may be used for the purpose of meeting deficiencies of income of the association, and for such additional investigations and publications as may be determined by said Board of Directors.

ACT OF INCORPORATION.

At a meeting of the Board of Directors of the National Educational Association, held at Saratoga Springs, N. Y., July 14, 1885, the following resolution was passed :

Resolved, That a committee of three be appointed to secure articles of incorporation for the National Educational Association, under United States or state laws, as speedily as may be.

N. A. Calkins, of New York ; Thomas W. Bicknell, of Massachusetts, and Eli T. Tappan, of Ohio, were appointed such committee.

Under the authority of the resolution quoted above, and with the approval of the committee, and by competent legal advice, the Chairman obtained a

CERTIFICATE OF INCORPORATION.

We, the undersigned, Norman A. Calkins, John Eaton, and Zalmon Richards, citizens of the United States, and two of them citizens of the District of Columbia, do hereby associate ourselves together, pursuant to the provisions of the Act of General Incorporation, Class Third, of the Revised Statutes of the District of Columbia, under the name of the "National Educational Association," for the full period of twenty years, the purpose and objects of which are to elevate the character and advance the interests of the profession of teaching and to promote the cause of popular education in the United States. . . . To secure the full benefit of said act, we do here execute this our certificate of incorporation as said act provides.

In witness whereof, we severally set our hands and seals this 24th day of February, 1886, at Washington, D. C.

NORMAN A. CALKINS, [L. S.]

JOHN EATON, [L. S.]

ZALMON RICHARDS. [L. S.]

Duly acknowledged before Michael P. Callan, Notary Public in and for the District of Columbia, and recorded in Liber No. 4, Acts of Incorporation for the District of Columbia.

CALENDAR OF MEETINGS.

NATIONAL TEACHERS' ASSOCIATION.

- 1857.—PHILADELPHIA, PA. (Organized.)
JAMES L. ENOS, Chairman.
W. E. SHELDON, Secretary.
- 1858.—CINCINNATI, O.
Z. RICHARDS, President.
J. W. BULKLEY, Secretary.
A. J. RICKOFF, Treasurer.
- 1859.—WASHINGTON, D. C.
A. J. RICKOFF, President.
J. W. BULKLEY, Secretary.
C. S. PENNELL, Treasurer.
- 1860.—BUFFALO, N. Y.
J. W. BULKLEY, President.
Z. RICHARDS, Secretary.
O. C. WIGHT, Treasurer.
- 1861, 1862.—No session.
- 1863.—CHICAGO, ILL.
JOHN D. PHILBRICK, President.
JAMES CRUIKSHANK, Secretary.
O. C. WIGHT, Treasurer.
- 1864.—OGDENSBURG, N. Y.
W. H. WELLS, President.
DAVID N. CAMP, Secretary.
Z. RICHARDS, Treasurer.
- 1865.—HARRISBURG, PA.
S. S. GREENE, President.
W. E. SHELDON, Secretary.
Z. RICHARDS, Treasurer.
- 1866.—INDIANAPOLIS, IND.
J. P. WICKERSHAM, President.
S. H. WHITE, Secretary.
S. P. BATES, Treasurer.
- 1867.—No session.
- 1868.—NASHVILLE, TENN.
J. M. GREGORY, President.
L. VAN BOKKELEN, Secretary.
JAMES CRUIKSHANK, Treasurer.
- 1869.—TRENTON, N. J.
L. VAN BOKKELEN, President.
W. E. CROSBY, Secretary.
A. L. BARBER, Treasurer.
- 1870.—CLEVELAND, O.
DANIEL B. HAGER, President.
A. P. MARBLE, Secretary.
W. E. CROSBY, Treasurer.

NAME CHANGED TO

NATIONAL EDUCATIONAL ASSOCIATION.

- 1871.—ST. LOUIS, MO.
J. L. PICKARD, President.
W. E. CROSBY, Secretary.
JOHN HANCOCK, Treasurer.
- 1872.—BOSTON, MASS.
E. E. WHITE, President.
S. H. WHITE, Secretary.
JOHN HANCOCK, Treasurer.
- 1873.—ELMIRA, N. Y.
B. G. NORTHROP, President.
S. H. WHITE, Secretary.
JOHN HANCOCK, Treasurer.
- 1874.—DETROIT, MICH.
S. H. WHITE, President.
A. P. MARBLE, Secretary.
JOHN HANCOCK, Treasurer.
- 1875.—MINNEAPOLIS, MINN.
W. T. HARRIS, President.
W. R. ABBOTT, Secretary.
A. P. MARBLE, Treasurer.
- 1876.—BALTIMORE, MD.
W. F. PHELPS, President.
W. D. HENKLE, Secretary.
A. P. MARBLE, Treasurer.
- 1877.—LOUISVILLE, KY.
M. A. NEWELL, President.
W. D. HENKLE, Secretary.
J. ORMOND WILSON, Treasurer.
- 1878.—No session.
- 1879.—PHILADELPHIA, PA.
JOHN HANCOCK, President.
W. D. HENKLE, Secretary.
J. ORMOND WILSON, Treasurer.
- 1880.—CHAUTAUQUA, N. Y.
J. ORMOND WILSON, President.
W. D. HENKLE, Secretary.
E. T. TAPPAN, Treasurer.

- 1881.—ATLANTA, GA.
JAMES H. SMART, President.
W. D. HENKLE, Secretary.
E. T. TAPPAN, Treasurer.
- 1882.—SARATOGA SPRINGS, N. Y.
G. J. ORR, President.
W. E. SHELDON, Secretary.
H. S. TARBELL, Treasurer.
- 1883.—SARATOGA SPRINGS, N. Y.
E. T. TAPPAN, President.
W. E. SHELDON, Secretary.
N. A. CALKINS, Treasurer.
- 1884.—MADISON, WIS.
THOMAS W. BICKNELL, President.
H. S. TARBELL, Secretary.
N. A. CALKINS, Treasurer.
- 1885.—SARATOGA SPRINGS, N. Y.
F. LOUIS SOLDAN, President.
W. E. SHELDON, Secretary.
N. A. CALKINS, Treasurer.
- 1886.—TOPEKA, KAN.
N. A. CALKINS, President.
W. E. SHELDON, Secretary.
E. C. HEWETT, Treasurer.
- 1887.—CHICAGO, ILL.
W. E. SHELDON, President.
J. H. CANFIELD, Secretary.
E. C. HEWETT, Treasurer.
- 1888.—SAN FRANCISCO, CAL.
AARON GOVE, President.
J. H. CANFIELD, Secretary.
E. C. HEWETT, Treasurer.
- 1889.—NASHVILLE, TENN.
ALBERT P. MARBLE, President.
J. H. CANFIELD, Secretary.
E. C. HEWETT, Treasurer.
- 1890.—ST. PAUL, MINN.
J. H. CANFIELD, President.
W. R. GARRETT, Secretary.
E. C. HEWETT, Treasurer.
- 1891.—TORONTO, ONTARIO.
W. R. GARRETT, President.
E. H. COOK, Secretary.
J. M. GREENWOOD, Treasurer.
- 1892.—SARATOGA SPRINGS, N. Y.
E. H. COOK, President.
R. W. STEVENSON, Secretary.
J. M. GREENWOOD, Treasurer.
- 1893.—CHICAGO, ILL.
(International Congress of Education.)
ALBERT G. LANE, President.
IRWIN SHEPARD, Secretary.
J. M. GREENWOOD, Treasurer.
- 1894.—ASBURY PARK, N. J.
ALBERT G. LANE, President.
IRWIN SHEPARD, Secretary.
J. M. GREENWOOD, Treasurer.
- 1895.—DENVER, COLO.
NICHOLAS M. BUTLER, President.
IRWIN SHEPARD, Secretary.
I. C. MCNEILL, Treasurer.
- 1896.—BUFFALO, N. Y.
NEWTON C. DOUGHERTY, President.
IRWIN SHEPARD, Secretary.
I. C. MCNEILL, Treasurer.
- 1897.—MILWAUKEE, WIS.
CHARLES R. SKINNER, President.
IRWIN SHEPARD, Secretary.
I. C. MCNEILL, Treasurer.

NATIONAL EDUCATIONAL ASSOCIATION

OF THE UNITED STATES.

OFFICERS FOR 1896-97.

GENERAL ASSOCIATION.

CHARLES R. SKINNER.....	<i>President</i>	Albany, N. Y.
IRWIN SHEPARD.....	<i>Secretary</i>	Winona, Minn.
I. C. McNEILL	<i>Treasurer</i>	West Superior, Wis.

VICE-PRESIDENTS.

NEWTON C. DOUGHERTY, Peoria, Ill.	MISS EMMA F. BATES, Bismarck, N. D
W. H. BARTHOLOMEW, Louisville, Ky.	JAMES K. POWERS, Florence, Ala.
J. N. WILKINSON, Emporia, Kan.	C. G. PEARSE, Omaha, Neb.
T. A. FUTRALL, Marianna, Ark.	J. H. COLLINS, Springfield, Ill.
W. W. STETSON, Augusta, Me.	THOMAS B. STOCKWELL, Providence, R. I.
OSCAR H. COOPER, Galveston, Tex.	J. T. MERRILL, Cedar Rapids, Ia.

BOARD OF TRUSTEES.

(See Art. IV., Secs. 9 and 10, of the Constitution.)

ALBERT G. LANE.....	<i>Chairman</i>	Chicago, Ill.
NICHOLAS MURRAY BUTLER.....	<i>Secretary</i>	Columbia Univ., New York, N. Y.
HORACE S. TARBELL	Providence, R. I.....	Term expires July, 1897.
NICHOLAS MURRAY BUTLER.....	New York, N. Y.....	Term expires July, 1898.
ALBERT G. LANE.....	Chicago, Ill.....	Term expires July, 1899.
J. ORMOND WILSON.....	Washington, D. C.....	Term expires July, 1900.
CHARLES R. SKINNER	Albany, N. Y.....	<i>Ex officio.</i>

EXECUTIVE COMMITTEE.

(See Art. IV., Sec. 2, of the Constitution.)

CHARLES R. SKINNER.....	<i>President</i>	Albany, N. Y.
NEWTON C. DOUGHERTY.....	<i>First Vice-President</i>	Peoria, Ill.
IRWIN SHEPARD.....	<i>Secretary</i>	Winona, Minn.
I. C. McNEILL.....	<i>Treasurer</i>	West Superior, Wis.
ALBERT G. LANE.....	<i>Chairman Board of Trustees</i> ...	Chicago, Ill.

BOARD OF DIRECTORS.

Directors *Ex Officio.*

(See Art. IV., Sec. 2, of the Constitution.)

CHARLES R. SKINNER, Albany, N. Y.	IRWIN SHEPARD, Winona, Minn.
NEWTON C. DOUGHERTY, Peoria, Ill.	I. C. McNEILL, West Superior, Wis.
ALBERT G. LANE, Chicago, Ill.	

Life Directors.

(See Art. IV., Sec. 2, of the Constitution.)

BICKNELL, THOMAS W., Providence, R. I.	GARRETT, W. R., Nashville, Tenn.
BROWN, LEROY D., Santa Monica, Cal.	GRAHAM, H. A., Ontonagon, Mich.
BUTLER, NICHOLAS MURRAY, New York, N. Y.	GREENWOOD, J. M., Kansas City, Mo.
CANFIELD, JAMES H., Columbus, O.	GOVE, AARON, Denver, Colo.
COOK, E. H., Flushing, N. Y.	HALL, CALEB G., New Berlin, N. Y.
DAY, L. W., Cleveland, O.	HARRIS, W. T., Washington, D. C.
DOUGHERTY, NEWTON C., Peoria, Ill.	HUNT, MARY H., Boston, Mass.
FAIRCHILD, GEORGE T., Manhattan, Kan.	JEWETT, A. V., Abilene, Kan.

Life Directors—Continued.

LANE, ALBERT G., Chicago, Ill.
 MARBLE, ALBERT P., New York, N. Y.
 MARSHALL, T. MARCELLUS, Hyden, Ky.
 NORTHRUP, B. G., Clinton, Conn.
 PARKER, CHAS. I., South Chicago, Ill.
 PHELPS, W. F., St. Paul, Minn.
 PICKARD, J. L., Iowa City, Ia.
 PIKE, J., Jerseyville, Ill.
 RICHARDS, ZALMON, Washington, D. C.

RICKOFF, ANDREW J., Berkeley, Cal.
 SHELDON, W. E., Boston, Mass.
 SMART, JAMES H., Lafayette, Ind.
 SOLDAN, F. LOUIS, St. Louis, Mo.
 STRATTON, C. C., University Park, Ore.
 TAYLOR, A. R., Emporia, Kan.
 WHITE, CHAS. G., Lake Linden, Mich.
 WHITE, E. E., Columbus, O.
 WILSON, J. ORMOND, Washington, D. C.

Directors by Election.*North Atlantic Division.*

Maine.....	JOHN S. LOCKE.....	Saco.
New Hampshire.....	C. C. ROUNDS.....	Plymouth.
Vermont.....	MASON STONE.....	Montpelier.
Massachusetts.....	CHARLES F. CARROLL.....	Worcester.
Rhode Island.....	GILMAN C. FISHER.....	Pawtucket.
Connecticut.....	GEORGE B. HURD.....	New Haven.
New York.....	A. B. BLODGETT.....	Syracuse.
New Jersey.....	JAMES M. RALSTON.....	Asbury Park.

South Atlantic Division.

Pennsylvania.....	N. C. SCHAEFFER.....	Harrisburg.
Delaware.....	A. H. BERLIN.....	Wilmington.
Maryland.....	HENRY A. WISE.....	Baltimore.
District of Columbia.....	JOHN EATON.....	Washington.
Virginia.....	E. C. GLASS.....	Lynchburgh.
West Virginia.....	J. L. GOODKNIGHT.....	Morgantown.
North Carolina.....	CHARLES D. McIVER.....	Greensboro.
South Carolina.....	W. H. HAND.....	Chester.
Florida.....	W. N. SHEATS.....	Tallahassee.

South Central Division.

Kentucky.....	McHENRY RHODS.....	Frankfort.
Tennessee.....	WHARTON S. JONES.....	Memphis.
Georgia.....	EULER B. SMITH.....	Athens.
Alabama.....	F. M. ROOF.....	Birmingham.
Mississippi.....	A. A. KINCANNON.....	Jackson.
Louisiana.....	WARREN EASTON.....	New Orleans.
Texas.....	H. C. PRITCHETT.....	Huntsville.
Oklahoma.....	DAVID R. BOYD.....	Norman.
Arkansas.....	J. H. HINEMON.....	Pine Bluff.

North Central Division.

Ohio.....	J. J. BURNS.....	Canton.
Indiana.....	MARY E. NICHOLSON.....	Indianapolis.
Illinois.....	F. D. THOMPSON.....	Galesburg.
Michigan.....	S. E. WHITNEY.....	Detroit.
Wisconsin.....	L. D. HARVEY.....	Milwaukee.
Iowa.....	F. B. COOPER.....	Des Moines.
Minnesota.....	C. M. JORDAN.....	Minneapolis.
Missouri.....	JOHN R. KIRK.....	Jefferson City.
North Dakota.....	EMMA F. BATES.....	Bismarck.
South Dakota.....	GEORGE M. SMITH.....	Vermillion.
Nebraska.....	FRANK A. BARTON.....	Lincoln.
Kansas.....	JOHN MACDONALD.....	Topeka.

Western Division.

Montana.....	J. M. HAMILTON.....	Missoula.
Wyoming.....	A. L. PUTNAM.....	New Castle.
Colorado.....	J. H. VAN SICKLE.....	Denver.
New Mexico.....	HIRAM HADLEY.....	Albuquerque.
Arizona.....	T. B. COMSTOCK.....	Tucson.

Directors by Election.*Western Division.—Continued.*

Utah	W. R. MALONE	Salt Lake City.
Nevada	J. E. STUBBS	Reno.
Idaho	F. B. GAULT	Moscow.
Washington	MARK W. HARRINGTON	Seattle.
Oregon	M. G. ROYAL	Weston.
California	JAMES A. FOSHAY	Los Angeles.

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HORACE S. TARBELL	<i>Executive Committee</i>	Providence, R. I.
JAMES M. GREENWOOD	<i>Executive Committee</i>	Kansas City, Mo.
WILLIAM E. SHELDON	<i>Executive Committee</i>	Boston, Mass.
WILLIAM F. KING	<i>Executive Committee</i>	Mt. Vernon, Ia.

Kindergarten.

Miss CAROLINE T. HAVEN	<i>President</i>	New York, N. Y.
Miss ELLA C. ELDER	<i>Vice-President</i>	Buffalo, N. Y.
Mrs. M. J. B. WYLIE	<i>Secretary</i>	Buffalo, N. Y.

Elementary.

Miss SARAH C. BROOKS	<i>President</i>	St. Paul, Minn.
E. B. COX	<i>Vice-President</i>	Xenia, O.
Miss IDA C. BENDER	<i>Secretary</i>	Buffalo, N. Y.

Secondary.

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FRANK L. FOSDICK	<i>Vice-President</i>	Buffalo, N. Y.
Miss IDA B. HASLUP	<i>Secretary</i>	Pueblo, Colo.

Higher.

JOSEPH SWAIN	<i>President</i>	Bloomington, Ind.
J. G. SCHURMAN	<i>Vice-President</i>	Ithaca, N. Y.
GEORGE PARKER WINSHIP	<i>Secretary</i>	Providence, R. I.

Normal.

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Z. X. SNYDER	<i>Vice-President</i>	Greeley, Colo.
E. A. STRONG	<i>Secretary</i>	Ypsilanti, Mich.

Superintendence.

C. B. GILBERT	<i>President</i>	St. Paul, Minn.
A. B. BLODGETT	<i>First Vice-President</i>	Syracuse, N. Y.
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LAWTON B. EVANS	<i>Secretary</i>	Augusta, Ga.

Manual and Industrial.

OSCAR CLUTE	<i>President</i>	Lake City, Fla.
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JUDSON E. HOYT	<i>Secretary</i>	Menomonie, Wis.

Art.

MARK MAYCOCK	<i>President</i>	Buffalo, N. Y.
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D. R. AUGSBURG	<i>Secretary</i>	Salt Lake City, Utah.

Music.

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C. W. WEEKS	<i>Secretary</i>	Ottawa, Ill.

Business.

A. N. PALMER.....	<i>President</i>	Cedar Rapids, Ia.
J. E. KING.....	<i>First Vice-President</i>	Rochester, N. Y.
C. H. CHILDS	<i>Second Vice-President</i>	Holyoke, Mass.
ALLAN DAVIS'.....	<i>Secretary</i>	Washington, D. C.
DURAND W. SPRINGER	<i>Chairman Executive Committee</i>	Ann Arbor, Mich.

Child Study.

FRANCIS W. PARKER	<i>President</i>	Chicago, Ill.
H. E. KRATZ	<i>Vice-President</i>	Sioux City, Ia.
MARGARET SCHALLENBERGER	<i>Secretary</i>	Stanford Univ., Cal.

Physical Training.

Miss R. ANNA MORRIS	<i>President</i>	Cleveland, O.
J. N. WILKINSON.....	<i>Vice-President</i>	Emporia, Kan.
H. B. BOICE.....	<i>Secretary</i>	Trenton, N. J.

Science.

CHARLES SKEELE PALMER	<i>President</i>	Boulder, Colo.
ALBERT H. TUTTLE	<i>Vice-President</i>	Charlottesville, Va.
IRWEN LEVISTON.....	<i>Secretary</i>	Omaha, Neb.

School Administration.

H. L. GETZ.....	<i>President</i>	Marshalltown, Ia.
L. A. SATER.....	<i>First Vice-President</i>	Syracuse, N. Y.
W. H. BENNETT.....	<i>Second Vice-President</i>	Milwaukee, Wis.
R. L. YAEGER.....	<i>Third Vice-President</i>	Kansas City, Mo.
WILLIAM GEORGE BRUCE	<i>Secretary</i>	Milwaukee, Wis.

Library.

MELVIL DEWEY.	<i>President</i>	Albany, N. Y.
J. H. VAN SICKLE	<i>Vice-President</i>	Denver, Colo.
Miss MARY EILEEN AHERN.	<i>Secretary</i>	Chicago, Ill.

NATIONAL EDUCATIONAL ASSOCIATION

OF THE UNITED STATES.

OFFICERS FOR 1897-98.

GENERAL ASSOCIATION.

JAMES M. GREENWOOD.....	<i>President</i>	Kansas City, Mo.
IRWIN SHEPARD	<i>Secretary</i>	Winona, Minn.
I. C. McNEILL.....	<i>Treasurer</i>	West Superior, Wis.

VICE-PRESIDENTS.

CHARLES R. SKINNER, Albany, N. Y.	L. D. HARVEY, Milwaukee, Wis.
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J. L. HOLLOWAY, Fort Smith, Ark.	HIRAM HADLEY, Albuquerque, N. M.
E. ORAM LYTE, Millersville, Pa.	W. H. H. BEADLE, Madison, S. D.
JAMES M. RALSTON, Asbury Park, N. J.	JOHN H. McCAHAN, Baltimore, Md.
MISS MARGARET W. SUTHERLAND, Columbus, O.	S. T. BLACK, Sacramento, Cal.

BOARD OF TRUSTEES.

(See Art. IV., Secs. 9 and 10, of the Constitution.)

ALBERT G. LANE.....	<i>Chairman</i>	Chicago, Ill.
NICHOLAS MURRAY BUTLER.....	<i>Secretary</i>	New York, N. Y.
NICHOLAS MURRAY BUTLER.....	New York, N. Y.....	Term expires July, 1898.
ALBERT G. LANE.....	Chicago, Ill.....	Term expires July, 1899.
J. ORMOND WILSON.....	Washington, D. C.....	Term expires July, 1900.
F. LOUIS SOLDAN	St. Louis, Mo.....	Term expires July, 1901.
JAMES M. GREENWOOD	Kansas City, Mo.....	<i>Ex officio</i>

EXECUTIVE COMMITTEE.

(See Art. IV., Sec. 2, of the Constitution.)

JAMES M. GREENWOOD.....	<i>President</i>	Kansas City, Mo.
CHARLES R. SKINNER	<i>First Vice-President</i>	Albany, N. Y.
IRWIN SHEPARD	<i>Secretary</i>	Winona, Minn.
I. C. McNEILL.....	<i>Treasurer</i>	West Superior, Wis.
ALBERT G. LANE.....	<i>Chairman Board of Trustees...</i>	Chicago, Ill.

BOARD OF DIRECTORS.

Directors *Ex Officio*.

(See Art. IV., Sec. 2, of the Constitution.)

JAMES M. GREENWOOD, Kansas City, Mo.	IRWIN SHEPARD, Winona, Minn.
CHARLES R. SKINNER, Albany, N. Y.	I. C. McNEILL, West Superior, Wis.
ALBERT G. LANE, Chicago, Ill.	

Life Directors.

(See Art. IV., Sec. 2, of the Constitution.)

BICKNELL, THOMAS W., Providence, R. I.	GRAHAM, H. A., Ontonagon, Mich.
BROWN, LEROY D., Santa Monica, Cal.	GREENWOOD, J. M., Kansas City, Mo.
BUTLER, NICHOLAS MURRAY, New York, N. Y.	GOVE, AARON, Denver, Colo.
CANFIELD, JAMES H., Columbus, O.	HALL, CALEB G., New Berlin, N. Y.
COOK, E. H., Flushing, N. Y.	HARRIS, W. T., Washington, D. C.
DAY, L. W., Cleveland, O.	HUNT, MARY H., Boston, Mass.
DOUGHERTY, NEWTON C., Peoria, Ill.	JEWETT, A. V., Abilene, Kan.
FAIRCHILD, GEORGE T., Manhattan, Kan.	LANE, ALBERT G., Chicago, Ill.
GARRETT, W. R., Nashville, Tenn.	MARBLE, ALBERT P., New York, N. Y.

Life Directors.—Continued.

MARSHALL, T. MARCELLUS, Hyden, Ky.	SHELDON, W. E., Boston, Mass.
NORTHROP, B. G., Clinton, Conn.	SKINNER, CHARLES R., Albany, N. Y.
PARKER, CHAS. I., South Chicago, Ill.	SMART, JAMES H., Lafayette, Ind.
PHELPS, W. F., St. Paul, Minn.	SOLDAN, F. LOUIS, St. Louis, Mo.
PIKE, J., Jerseyville, Ill.	STRATTON, C. C., University Park, Ore.
PICKARD, J. L., Iowa City, Ia.	TAYLOR, A. R., Emporia, Kan.
RICHARDS, ZALMON, Washington, D. C.	WHITE, CHARLES G., Lake Linden, Mich.
RICKOFF, ANDREW J., Berkeley, Cal.	WHITE, E. E., Columbus, O.
WILSON, J. ORMOND, Washington, D. C.	

*Directors by Election.**North Atlantic Division.*

Maine.....	JOHN S. LOCKE.....	Saco.
New Hampshire.....	J. A. RUSSELL	Plymouth.
Vermont.....	MASON S. STONE.....	Montpelier.
Massachusetts.....	A. G. BOYDEN.....	Bridgewater.
Rhode Island.....	GILMAN C. FISHER.....	Pawtucket.
Connecticut.....	F. E. HOWARD.....	Bridgeport.
New York.....	A. S. DOWNING.....	Albany.
New Jersey.....	JAMES M. GREEN.....	Trenton.

South Atlantic Division.

Pennsylvania.....	S. T. SKIDMORE.....	Philadelphia.
Delaware.....	A. H. BERLIN.....	Wilmington.
Maryland.....	HENRY A. WISE.....	Baltimore.
District of Columbia.....	W. B. POWELL.....	Washington.
Virginia.....	E. C. GLASS.....	Lynchburgh.
West Virginia.....	W. H. ANDERSON.....	Wheeling.
North Carolina.....	CHARLES D. McIVER.....	Greensboro.
South Carolina.....	W. H. HAND.....	Chester.
Florida.....	OSCAR CLUTE.....	Lake City.

South Central Division.

Kentucky.....	E. W. WEAVER.....	Paris.
Tennessee.....	WHARTON S. JONES.....	Memphis.
Georgia.....	W. M. SLATON.....	Atlanta.
Alabama.....	JOHN T. GREGORY.....	Mobile.
Mississippi.....	E. E. BASS.....	Greenville.
Louisiana.....	WARREN EASTON.....	New Orleans.
Texas.....	GEORGE T. WINSTON.....	Austin.
Oklahoma.....	DAVID R. BOYD.....	Norman.
Arkansas.....	GEORGE B. COOK.....	Hot Springs.

North Central Division.

Ohio.....	F. B. DYER.....	Madisonville.
Indiana.....	EDWARD AYRES.....	Lafayette.
Illinois.....	J. H. COLLINS.....	Springfield.
Michigan.....	HENRY R. PATTENGILL.....	Lansing.
Wisconsin.....	MISS MAE E. SCHREIBER.....	Milwaukee.
Iowa.....	W. M. BEARDSHEAR.....	Ames.
Minnesota.....	C. M. JORDAN.....	Minneapolis.
Missouri.....	JOHN R. KIRK.....	Jefferson City.
North Dakota.....	W. L. STOCKWELL.....	Grafton.
South Dakota.....	A. H. AVERY.....	Woonsocket.
Nebraska.....	C. G. PEARSE.....	Omaha.
Kansas.....	JOHN MACDONALD.....	Topeka.

Western Division.

Montana.....	J. E. KLOCK.....	Helena.
Wyoming.....	MISS ESTELLE REEL.....	Cheyenne.
Colorado.....	L. C. GREENLEE.....	Denver.
New Mexico.....	C. M. LIGHT.....	Silver City.
Arizona.....	MISS LYDIA L. HUNT.....	San Carlos.

JAN
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E.C
JAN

JAN
CHU
TRV
I.C
ADP

Washington, Pa.
St. Louis, Mo.
Cleveland, O.
Ann Arbor, Mich.
Birmingham, Ala.
Holyoke, Mass.
New York, N. Y.

St. Louis, Mo.
New York, N. Y.
Milwaukee, Wis.

Washington, D. C.
Binghamton, N. Y.
Milwaukee, Wis.

Minneapolis, Minn.
Indianapolis, Ind.
LaGrange, Ill.

Channah, Minn.
Franklin, N. Y.
Franklin, N. Y.

Cornell Falls, Ind.
Cleveland, Wis.
Franklin, N. Y.

Franklin, Pa.
St. Louis, Mo.
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St. Louis, Mo.

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Business.

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W. F. LYON.....	<i>Second Vice-President</i>	Detroit, Mich.
D. M. WILLIS.....	<i>Secretary</i>	Morgantown, W. Va.
ALLAN DAVIS.....	<i>Chairman Executive Committee</i>	Washington, D. C.

Child Study.

M. V. O'SHEA.....	<i>President</i>	Madison, Wis.
Miss SARAH A. STEWART.....	<i>Vice-President</i>	Milwaukee, Wis.
G. W. A. LUCKEY.....	<i>Secretary</i>	Lincoln, Neb.

Physical Training.

C. E. EHINGER.....	<i>President</i>	West Chester, Pa.
Miss R. ANNA MORRIS.....	<i>Vice-President</i>	Cleveland, O.
H. B. BOICE.....	<i>Secretary</i>	Trenton, N. J.

Science.

P. C. FREER.....	<i>President</i>	Ann Arbor, Mich.
C. N. COBB.....	<i>Vice-President</i>	Albany, N. Y.
C. J. LING.....	<i>Secretary</i>	Denver, Colo.

School Administration.

JOHN E. BRANDEGEE.....	<i>President</i>	Utica, N. Y.
KENTON CHICKERING.....	<i>First Vice-President</i>	Oil City, Pa.
CHARLES QUARLES.....	<i>Second Vice-President</i>	Milwaukee, Wis.
WM. GEO. BRUCE.....	<i>Secretary</i>	Milwaukee, Wis.
WM. S. MACK.....	<i>Chairman Executive Committee</i>	Aurora, Ill.

Library.

L. D. HARVEY.....	<i>President</i>	Milwaukee, Wis.
J. H. VANSICKLE.....	<i>Vice-President</i>	Denver, Colo.
Miss MYRTELLA AVERY.....	<i>Secretary</i>	Albany, N. Y.

Deaf, Blind, and Feeble-minded.

JOSEPH C. GORDON.....	<i>President</i>	Washington, D. C.
Miss SARAH FULLER.....	<i>Vice-President</i>	Boston, Mass.
Miss MARY McCOWEN.....	<i>Secretary and Treasurer</i>	Chicago, Ill.

TREASURER'S REPORT

TO THE

NATIONAL EDUCATIONAL ASSOCIATION

JULY 1, 1896, TO JULY 1, 1897.

MEETING AT BUFFALO, N. Y., 1896.

I. C. McNeill, Treasurer, in Account with the National Educational Association

DR.

To cash on Comptroller's checks issued in 1896, on account of balance in Union National Bank of Denver.....	\$ 132.15
To cash memberships, Buffalo meeting.....	1,146.00
To New York advanced memberships.....	2,358.00
To other cash memberships, collected during year.....	20.00
To memberships, Department of Superintendence, Indianapolis.....	404.00
To income on permanent investments.....	2,751.27
To sale of volumes, St. Louis Public Library.....	37.25
To collection of annual dues by Secretary Shepard, active memberships.....	1,066.25
To memberships from steamship lines.....	876.00
To memberships from railroads.....	11,749.95
	<hr/>
	\$20,540.87
*To error in old balances, including amount unavailable.....	540.62
*To error in report last year.....	.03
	<hr/>
Total.....	<u>\$21,081.52</u>

CR.

By cash advanced by Treasurer—Report of 1896 :

Unavailable funds in Union National Bank of Denver.....	\$ 528.59
Overdrafts paid.....	134.73
	<hr/>
	\$ 663.32

By expenses incurred during Buffalo meeting

Treasurer's clerks during Buffalo meeting (736).....	\$ 842.33
Expense of Secretary's office (745).....	120.09
Clerical work, auditing Treasurer's books (728).....	8.00
Supplies for typewriting (713).....	26.60
Stenographer's service (708).....	113.75
State managers (747, 776, 716, 722, 723, 724, 735, 726, 725).....	659.04
Departments, including Department Superintendence at Indianapolis (768, 738, 751, 755, 757, 775).....	260.29
Memberships refunded (742, 780).....	268.00
	<hr/>
	\$ 2,298.10

By printing volumes and proceedings :

Printing (706, 707, 709, 720, 749, 760, 762, 763).....	\$ 4,611.24
Express and freight (769, 727, 750, 761, 759, 765).....	1,399.85
Indexing (748, 732).....	342.70
	<hr/>
	\$ 6,353.79

By Committee of Twelve :

Henry Sabin (729).....	\$ 31.15
Henry Sabin (746).....	1,349.77
Henry Sabin (771).....	276.35
	<hr/>
	\$ 1,657.27

TREASURER'S REPORT

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By officers' expenses, stationery, postage, telegrams, traveling, etc.:

N. C. Dougherty (744, 705, 712).....	\$ 443.40
C. R. Skinner (777, 773).....	446.52
Irwin Shepard (731, 752, 766, 778).....	652.53
I. C. McNeill (730, 764, 779).....	170.25
	<u>\$ 1,712.70</u>

By Board of Trustees:

H. A. Tarbell (714).....	\$ 33.62
J. Ormond Wilson (721, 733, 718).....	31.01
A. G. Lane (781).....	63.35
	<u>\$ 127.98</u>

By paid Board of Trustees for permanent investments (743).....	\$ 4,000.00
By transfer of permanent funds (770).....	300.00
	<u>\$ 4,300.00</u>

By officers' salaries:

Zalmon Richards, former custodian (710, 711).....	\$ 325.00
Irwin Shepard, Secretary (754, 767).....	1,000.00
I. C. McNeill, Treasurer (756, 782).....	750.00
	<u>\$ 2,075.00</u>

Joint agency expenses:

F. C. Donald, Commissioner Central Traffic Association (734).....	\$ 500.00
F. C. Donald, redeeming ticket (774).....	19.00
Expenses at Buffalo (736).....	90.00
Joint agent at Indianapolis (753).....	11.00
	<u>\$ 620.00</u>

By other expenses:

Rent of depository at Washington (772, 719, 758).....	\$ 75.00
Rent of safety box at First National Bank of Superior (715).....	15.00
Fidelity and Deposit Co., Treasurer's bond (717).....	50.00
	<u>\$ 140.00</u>

Total disbursed.....	<u><u>\$19,948.16</u></u>
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SUMMARY.

By total disbursed as above.....	\$19,948.16
* By short credit in report 1896.....	20.50
* By balance, cash unavailable (Denver).....	\$ 528.59
By balance, cash in hand.....	584.27
	<u>1,112.86</u>
Total.....	<u><u>\$21,081.52</u></u>

NOTE: The figures in marks of parenthesis refer to the numbers of the orders issued by the Chairman of the Board of Trustees upon the Treasurer for payment of audited bills.

* The corrections in the above report were indicated by Charles C. Hoyt, accountant, who examined the books and accounts kept by Treasurers, and by the late N. A. Calkins, who, as Chairman of the Board of Trustees, received and disbursed current funds of the association. Since the Denver meeting the current funds of the association have been handled by the Treasurer and the permanent funds by the Board of Trustees.

I. C. McNEILL, *Treasurer.*

ELEVENTH ANNUAL REPORT OF THE BOARD OF TRUSTEES.

To the Board of Directors of the National Educational Association:

The Board of Trustees presents the following report of the condition of the Permanent Fund of the National Educational Association, for the year ending June 30, 1897:

Permanent Fund, July 1, 1896 \$54,961.75
In the following items:

Mortgage on real estate	\$ 3,000.00	
Kansas school and municipal bonds	35,937.00	
Illinois and Indiana school bonds	15,500.00	
Total investment	54,437.00	
Cash	524.75	\$54,961.75

Cash transferred to Permanent Fund from proceeds of Buffalo meeting 4,000.00

Cash belonging to Permanent Fund, held by Treasurer (see report for 1896), transferred 300.00

Total of Permanent Fund, July 1, 1897..... \$59,261.75

In the following items:

Mortgage on real estate.....	\$ 3,000.00	
Kansas school and municipal bonds.....	33,337.00	
Illinois and Indiana school bonds.....	21,500.00	
Total	57,837.00	
Cash on hand for investment.....	1,424.75	\$59,261.75

INCOME STATEMENT.

RECEIPTS.

Received interest on Permanent Fund.....	\$2,801.95	
“ royalty report Committee of Ten.....	66.60	
“ royalty report Committee of Fifteen	56.65	
		\$2,925.20

DISBURSEMENTS.

Paid exchange for coupon collections.....	\$ 0.75	
“ rent of box in Nassau Safe Deposit, New York.....	5.25	
“ rent of box in Merchants' Safe Deposit, Chicago	10.00	
“ express charges for transfer of bonds to Chicago.....	20.00	
“ blank books.....	2.60	
“ Harry Lyon, clerical service.....	25.00	
“ Bently & Hatfield, attorney's fees, Seward county bonds.....	50.00	
“ accrued interest on Lemont bonds.....	60.33	
Total	\$ 173.93	
“ I. C. McNeill, Treasurer.....	1,500.00	
“ I. C. McNeill, Treasurer.....	1,251.27	
		\$2,925.20

Investment, July 1, 1896 \$54,437.00

Bonds paid during the year:

Crawford Co., Kansas, District 120.....	\$ 100.00	
Greenwood Co., Kansas, District 2.....	200.00	
Logan Co., Kansas, District 2	500.00	
Reno Co., Kansas, District 119	300.00	
Sumner Co., Kansas, District 177.....	300.00	
Douglas Co., Kansas, Eudora Tp.....	1,000.00	
Douglas Co., Kansas, Eudora City.....	200.00	
		\$ 2,600.00
Total		\$51,837.00

Investments during the year:

Lemont, Illinois School Bonds, 5 per cent. ; Nos. 4, 6, 8, 12, 14, 16, 18, 20, 22, 24, 30, 32, for \$500 each	\$ 6,000.00
Investment July 1, 1897.....	\$57,837.00

STATEMENT OF SECURITIES AND BONDS BELONGING TO THE PERMANENT FUND OF THE NATIONAL EDUCATIONAL ASSOCIATION, JULY 1, 1897.

KANSAS SCHOOL BONDS.

County	Number school district	Amount	Rate of interest, per cent.	Interest payable	Bond due
Barton, - - - - -	66	\$330	6	Jan'y and July	January, 1900
Clark, - - - - -	42	500	6	"	July 1, 1901
Clark, - - - - -	60	100	6	"	January 1, 1901
Cowley, - - - - -	143	360	6	"	July 1, 1901
Crawford, - - - - -	120	300	6	"	\$100 January, 1898
					\$200 January, 1902
Decatur, - - - - -	35	440	6	"	July, 1901
Ellis, - - - - -	14	800	6	"	July, 1900
Ellis,* - - - - -	18	350	6	"	Jul., 1896 (past due)
Ellis, - - - - -	44	800	6	"	July, 1900
Garfield,* - - - - -	24	800	6	"	January, 1910
Greenwood, - - - - -	2	200	6	"	\$200 July, 1899
Mitchell,* - - - - -	43	500	6	"	Jul., 1895 (past due)
Mitchell, - - - - -	106	475	6	"	January, 1902
Ness, - - - - -	41	400	6	"	\$200 July, 1898
					\$200 1902
Ness, - - - - -	70	500	6	"	July, 1903
Norton, - - - - -	95	200	6	"	July, 1902
Osborne, - - - - -	52	310	6	"	July, 1899
Phillips, - - - - -	63	272	6	"	January, 1900
Pratt, - - - - -	36	500	6	"	July, 1901
Reno, - - - - -	51	500	6	"	July, 1902
Reno, - - - - -	51	500	6	"	July, 1902
Reno, - - - - -	120	300	6	"	January, 1902
Scott, - - - - -	6	400	6	"	July 1, 1897
Sheridan, - - - - -	22	100	6	"	January 1, 1902
Smith, - - - - -	109	400	6	"	April 1, 1902
Washington, - - - - -	136	500	6	"	July, 1898
		\$10,837			

KANSAS, COUNTY AND MUNICIPAL, BONDS.

County	Kind of bond	Bond Nos.	Amount	Rate of interest, per cent	Interest payable	Bond due
Cloud, -	City of Concordia, invested on Sept. 24, 1895	35 to 40	\$3,000	6	January and July	July 1, 1918
Douglas, - -	Eudora City	6 to 20	1,500	6	March	One due each year, March 1
Grant, - - -	County	47, 48	2,000	6	January and July	February, 1920
Hodgeman, - -	County	1	1,000	6	January and July	July 1, 1919
Kingman, - -	Aid bonds	1 to 7	7,000	6	Jan'y 31 and July	August 31, 1919
Lane,* - - -	County	11 to 13	3,000	6	January and July	July, 1918
Marion,* - -	City of Marion	1	1,000	5½	March and Sept.	March 1, 1900
McPherson, -	Sharp's Creek Tp., invested December 12, 1895	1	1,000	6	January and July	Sept'ber 1, 1916
Montgomery, -	Caney Tp.	2	1,000	6	April and October	October 1, 1916
Reno,* - - -	City of South Hutchinson	1, 2	1,000	7	Feb'y and August	April, 1908
Seward,* - -	With Bentley & Hatfield, Wichita, Kan.		1,000	for collection		
			\$22,500			

*Interest in default.

MISCELLANEOUS.

County	Amount	Rate of interest, per cent.	Interest payable	Bond due
Jackson, Kansas City, Mo., - - -	\$2,000	5	January and July	July 1, 1901
Cook, Chicago, Ill., - - - - -	2,000	6	March and September	March 10, 1898
Noblesville, Ind., - - - - -	5,000	5		July 1, 1900
DeKalb, Ill., - - - - -	3,000	5	April 1	April 1, 1900
Cook, village of Morgan Park, Ill., -	3,500	5	March and September	September, 1905
Providence, real estate, first mortgage,	3,000	6		
Lemont, Ill., school, Nos. 4, 6, 8, 12,				Issue \$16,000,
14, 16, 18, 20, 22, 24, 30, 32, -	6,000	5	June and December	\$1,000 due each year, June 1
	<u>\$24,500</u>			

RECAPITULATION.

Kansas bonds.....	\$33,337
Miscellaneous bonds and real estate mortgage.....	<u>24,500</u>
Total investment in bonds	\$57,837

ALBERT G. LANE, *Chairman*,
 NICHOLAS MURRAY BUTLER,
 H. S. TARBELL,
 CHARLES R. SKINNER.

The foregoing securities were examined at the Merchants' Safety Deposit Vaults, Chicago, July 2, 1897, and I certify that it is a correct statement of the investments belonging to the Permanent Fund of the National Educational Association, in the custody of A. G. Lane, Chairman of the Board of Trustees.

(Signed) ORVILLE T. BRIGHT.

JOURNAL OF PROCEEDINGS
OF THE
THIRTY-SIXTH ANNUAL MEETING
OF THE
NATIONAL EDUCATIONAL ASSOCIATION.
MILWAUKEE, WIS., JULY 6-9, 1897.

FIRST DAY'S PROCEEDINGS.

FIRST SESSION.—TUESDAY EVENING, JULY 6.

The association was called to order at 8 P. M., Tuesday, July 6, 1897, in the Exposition building, Milwaukee, by L. D. Harvey, President State Normal School at Milwaukee, Chairman of the Local Executive Committee.

Chorus by the Arion Club, Lyric Glee Club, Musical Society, and a Capella, under the leadership of Professor Protheroe, of Milwaukee.

Rabbi S. Hecht, D.D., Temple Emanu-El, Milwaukee, offered an invocation.

Music—"America"—by the Male Chorus.

PRESIDENT HARVEY:

Ladies and Gentlemen: Something more than a year and a half ago the legislature of Wisconsin was convened in special session, to do a special piece of work. It did that piece of work well. There were numerous and urgent calls for the introduction of other matters at that session of the legislature. The only exception made was the act of that legislature in passing a joint resolution inviting the National Educational Association to meet in Wisconsin in 1897, and this magnificent audience assembled here tonight is the response of the National Educational Association to that invitation.

It gives me great pleasure tonight to introduce to you his Excellency, Governor Edward Schofield, who will welcome you in behalf of the commonwealth.

Governor Edward Schofield of Wisconsin welcomed the association on behalf of the commonwealth. J. Q. Emery, Superintendent of Public Instruction of Wisconsin, extended a welcome on behalf of the educational interests of the state. W. G. Rauschenberger, Mayor of Milwaukee, spoke for the municipality, and H. O. R. Siefert, Superintendent of Schools, expressed a welcome on behalf of the educational interests of the city.

President Charles R. Skinner responded briefly to the addresses of welcome, and introduced A. E. Winship, President of the American Institute of Instruction, Boston, Mass., who responded for the New England states; J. L. Holloway, Superintendent of Schools, Fort Smith, Ark., responded for the South; Aaron Gove, Superintendent of Schools, Denver, Colo., for the West; and Albert G. Lane, Superintendent of Schools, Chicago, responded for the Mississippi valley.

Music—"Soldiers' Chorus" (Faust)—by the Male Chorus.

President Harvey then introduced Hon. Charles R. Skinner, of New York, President of the National Educational Association, who delivered an address on "The Best Education for the Masses."

Newton C. Dougherty, Superintendent of Schools, Peoria, Ill., addressed the association on "The Study of History in Our Public Schools."

The association adjourned to 9:15 A. M., July 7.

NATIONAL EDUCATIONAL ASSOCIATION

OF THE UNITED STATES.

OFFICERS FOR 1897-98.

GENERAL ASSOCIATION.

JAMES M. GREENWOOD.....	<i>President</i>	Kansas City, Mo.
IRWIN SHEPARD	<i>Secretary</i>	Winona, Minn.
I. C. McNEILL.....	<i>Treasurer</i>	West Superior, Wis.

VICE-PRESIDENTS.

CHARLES R. SKINNER, Albany, N. Y.	L. D. HARVEY, Milwaukee, Wis.
GEO. J. RAMSEY, Clinton, La.	W. W. STETSON, Auburn, Me.
J. L. HOLLOWAY, Fort Smith, Ark.	HIRAM HADLEY, Albuquerque, N. M.
E. ORAM LYTE, Millersville, Pa.	W. H. H. BEADLE, Madison, S. D.
JAMES M. RALSTON, Asbury Park, N. J.	JOHN H. McCAHAN, Baltimore, Md.
MISS MARGARET W. SUTHERLAND, Columbus, O.	S. T. BLACK, Sacramento, Cal.

BOARD OF TRUSTEES.

(See Art. IV., Secs. 9 and 10, of the Constitution.)

ALBERT G. LANE.....	<i>Chairman</i>	Chicago, Ill.
NICHOLAS MURRAY BUTLER.....	<i>Secretary</i>	New York, N. Y.
NICHOLAS MURRAY BUTLER.....	New York, N. Y.....	Term expires July, 1898.
ALBERT G. LANE.....	Chicago, Ill.....	Term expires July, 1899.
J. ORMOND WILSON.....	Washington, D. C.....	Term expires July, 1900.
F. LOUIS SOLDAN.....	St. Louis, Mo.....	Term expires July, 1901.
JAMES M. GREENWOOD.....	Kansas City, Mo.....	<i>Ex officio</i>

EXECUTIVE COMMITTEE.

(See Art. IV., Sec. 2, of the Constitution.)

JAMES M. GREENWOOD.....	<i>President</i>	Kansas City, Mo.
CHARLES R. SKINNER.....	<i>First Vice-President</i>	Albany, N. Y.
IRWIN SHEPARD.....	<i>Secretary</i>	Winona, Minn.
I. C. McNEILL.....	<i>Treasurer</i>	West Superior, Wis.
ALBERT G. LANE.....	<i>Chairman Board of Trustees</i> ...	Chicago, Ill.

BOARD OF DIRECTORS.

Directors *Ex Officio*.

(See Art. IV., Sec. 2, of the Constitution.)

JAMES M. GREENWOOD, Kansas City, Mo.	IRWIN SHEPARD, Winona, Minn.
CHARLES R. SKINNER, Albany, N. Y.	I. C. McNEILL, West Superior, Wis.
ALBERT G. LANE, Chicago, Ill.	

Life Directors.

(See Art. IV., Sec. 2, of the Constitution.)

BICKNELL, THOMAS W., Providence, R. I.	GRAHAM, H. A., Ontonagon, Mich.
BROWN, LEROY D., Santa Monica, Cal.	GREENWOOD, J. M., Kansas City, Mo.
BUTLER, NICHOLAS MURRAY, New York, N. Y.	GOVE, AARON, Denver, Colo.
CANFIELD, JAMES H., Columbus, O.	HALL, CALEB G., New Berlin, N. Y.
COOK, E. H., Flushing, N. Y.	HARRIS, W. T., Washington, D. C.
DAY, L. W., Cleveland, O.	HUNT, MARY H., Boston, Mass.
DOUGHERTY, NEWTON C., Peoria, Ill.	JEWETT, A. V., Abilene, Kan.
FAIRCHILD, GEORGE T., Manhattan, Kan.	LANE, Albert G., Chicago, Ill.
GARRETT, W. R., Nashville, Tenn.	MARBLE, Albert P., New York, N. Y.

Life Directors.—Continued.

MARSHALL, T. MARCELLUS, Hyden, Ky.	SHELDON, W. E., Boston, Mass.
NORTHROP, B. G., Clinton, Conn.	SKINNER, CHARLES R., Albany, N. Y.
PARKER, CHAS. I., South Chicago, Ill.	SMART, JAMES H., Lafayette, Ind.
PHELPS, W. F., St. Paul, Minn.	SOLDAN, F. LOUIS, St. Louis, Mo.
PIKE, J., Jerseyville, Ill.	STRATTON, C. C., University Park, Ore.
PICKARD, J. L., Iowa City, Ia.	TAYLOR, A. R., Emporia, Kan.
RICHARDS, ZALMON, Washington, D. C.	WHITE, CHARLES G., Lake Linden, Mich.
RICKOFF, ANDREW J., Berkeley, Cal.	WHITE, E. E., Columbus, O.
WILSON, J. ORMOND, Washington, D. C.	

*Directors by Election.**North Atlantic Division.*

Maine.....	JOHN S. LOCKE.....	Saco.
New Hampshire.....	J. A. RUSSELL.....	Plymouth.
Vermont.....	MASON S. STONE.....	Montpelier.
Massachusetts.....	A. G. BOYDEN.....	Bridgewater.
Rhode Island.....	GILMAN C. FISHER.....	Pawtucket.
Connecticut.....	F. E. HOWARD.....	Bridgeport.
New York.....	A. S. DOWNING.....	Albany.
New Jersey.....	JAMES M. GREEN.....	Trenton.

South Atlantic Division.

Pennsylvania.....	S. T. SKIDMORE.....	Philadelphia.
Delaware.....	A. H. BERLIN.....	Wilmington.
Maryland.....	HENRY A. WISE.....	Baltimore.
District of Columbia.....	W. B. POWELL.....	Washington.
Virginia.....	E. C. GLASS.....	Lynchburgh.
West Virginia.....	W. H. ANDERSON.....	Wheeling.
North Carolina.....	CHARLES D. MCIVER.....	Greensboro.
South Carolina.....	W. H. HAND.....	Chester.
Florida.....	OSCAR CLUTE.....	Lake City.

South Central Division.

Kentucky.....	E. W. WEAVER.....	Paris.
Tennessee.....	WHARTON S. JONES.....	Memphis.
Georgia.....	W. M. SLATON.....	Atlanta.
Alabama.....	JOHN T. GREGORY.....	Mobile.
Mississippi.....	E. E. BASS.....	Greenville.
Louisiana.....	WARREN EASTON.....	New Orleans.
Texas.....	GEORGE T. WINSTON.....	Austin.
Oklahoma.....	DAVID R. BOYD.....	Norman.
Arkansas.....	GEORGE B. COOK.....	Hot Springs.

North Central Division.

Ohio.....	F. B. DYER.....	Madisonville.
Indiana.....	EDWARD AYRES.....	Lafayette.
Illinois.....	J. H. COLLINS.....	Springfield.
Michigan.....	HENRY R. PATTENGILL.....	Lansing.
Wisconsin.....	MISS MAE E. SCHREIBER.....	Milwaukee.
Iowa.....	W. M. BEARDSHEAR.....	Ames.
Minnesota.....	C. M. JORDAN.....	Minneapolis.
Missouri.....	JOHN R. KIRK.....	Jefferson City.
North Dakota.....	W. L. STOCKWELL.....	Grafton.
South Dakota.....	A. H. AVERY.....	Woonsocket.
Nebraska.....	C. G. PEARSE.....	Omaha.
Kansas.....	JOHN MACDONALD.....	Topeka.

Western Division.

Montana.....	J. E. KLOCK.....	Helena.
Wyoming.....	MISS ESTELLE REEL.....	Cheyenne.
Colorado.....	L. C. GREENLEE.....	Denver.
New Mexico.....	C. M. LIGHT.....	Silver City.
Arizona.....	MISS LYDIA L. HUNT.....	San Carlos.

Directors by Election.—Continued.*Western Division.—Continued.*

Utah	J. M. TANNER.....	Logan.
Nevada.....	J. E. STUBBS.....	Reno.
Idaho.....	J. C. BLACK.....	Albion.
Washington.....	R. S. BINGHAM.....	Tacoma.
Oregon.....	E. B. McELROY.....	Eugene.
California.....	CHARLES H. KEYES.....	Berkeley.

DEPARTMENT OFFICERS.**National Council.**

CHARLES DeGARMO.....	<i>President</i>	Swarthmore, Pa.
WM. F. KING.....	<i>Vice-President</i>	Mt. Vernon, Ia.
MISS BETTIE A. DUTTON.....	<i>Secretary</i>	Cleveland, O.
B. A. HINSDALE.....	<i>Executive Committee</i>	Ann Arbor, Mich.
J. H. PHILLIPS.....	<i>Executive Committee</i>	Birmingham, Ala.
CHARLES H. KEYES.....	<i>Executive Committee</i>	Holyoke, Mass.
WALTER L. HERVEY.....	<i>Executive Committee</i>	New York, N. Y.

Kindergarten.

MISS MARY C. McCULLOCH.....	<i>President</i>	St. Louis, Mo.
MRS. JENNY B. MERRILL.....	<i>Vice-President</i>	New York, N. Y.
MISS MARY F. HALL.....	<i>Secretary</i>	Milwaukee, Wis.

Elementary.

WM. N. HAILMANN.....	<i>President</i>	Washington, D. C.
R. H. HALSEY.....	<i>Vice-President</i>	Binghamton, N. Y.
MISS HARRIET E. SMITH.....	<i>Secretary</i>	Milwaukee, Wis.

Secondary.

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MRS. MAY WRIGHT SEWALL.....	<i>Vice-President</i>	Indianapolis, Ind.
E. G. COOLEY.....	<i>Secretary</i>	LaGrange, Ill.

Higher.

R. H. JESSE.....	<i>President</i>	Columbia, Mo.
A. T. ORMOND.....	<i>Vice-President</i>	Princeton, N. J.
HENRY WADE ROGERS.....	<i>Secretary</i>	Evanston, Ill.

Normal.

H. H. SEERLEY.....	<i>President</i>	Cedar Falls, Ia.
MISS ROSE C. SWART.....	<i>Vice-President</i>	Oshkosh, Wis.
F. B. PALMER.....	<i>Secretary</i>	Fredonia, N. Y.

Superintendence.

N. C. SCHAEFFER.....	<i>President</i>	Harrisburg, Pa.
F. B. COOPER.....	<i>First Vice-President</i>	Des Moines, Ia.
E. H. MARK.....	<i>Second Vice-President</i>	Louisville, Ky.
W. L. STEELE.....	<i>Secretary</i>	Galesburg, Ill.

Manual and Industrial.

EDWARD O. SISSON.....	<i>President</i>	Peoria, Ill.
WM. R. LAZENBY.....	<i>Vice-President</i>	Columbus, O.
JUDSON E. HOYT.....	<i>Secretary</i>	Menomonie, Wis.

Art.

MISS HARRIET CECIL MAGEE.....	<i>President</i>	Oshkosh, Wis.
D. R. AUGSBURG.....	<i>Vice-President</i>	Salt Lake City, Utah.
MISS FLORENCE B. HIMES.....	<i>Secretary</i>	Albany, N. Y.

Music.

O. E. McFADON.....	<i>President</i>	Minneapolis, Minn.
MRS. EMMA A. THOMAS.....	<i>Vice-President</i>	Detroit, Mich.
MISS S. LILLIAN BYINGTON.....	<i>Secretary</i>	Moline, Ill.

Business.

D. W. SPRINGER.....	<i>President.....</i>	Ann Arbor, Mich.
A. N. PALMER.....	<i>First Vice-President.....</i>	Cedar Rapids, Ia.
W. F. LYON.....	<i>Second Vice-President.....</i>	Detroit, Mich.
D. M. WILLIS.....	<i>Secretary.....</i>	Morgantown, W. Va.
ALLAN DAVIS.....	<i>Chairman Executive Committee</i>	Washington, D. C.

Child Study.

M. V. O'SHEA.....	<i>President.....</i>	Madison, Wis.
Miss SARAH A. STEWART.....	<i>Vice-President.....</i>	Milwaukee, Wis.
G. W. A. LUCKEY.....	<i>Secretary.....</i>	Lincoln, Neb.

Physical Training.

C. E. EHINGER.....	<i>President.....</i>	West Chester, Pa.
Miss R. ANNA MORRIS.....	<i>Vice-President.....</i>	Cleveland, O.
H. B. BOICE.....	<i>Secretary.....</i>	Trenton, N. J.

Science.

P. C. FREER.....	<i>President.....</i>	Ann Arbor, Mich.
C. N. COBB.....	<i>Vice-President.....</i>	Albany, N. Y.
C. J. LING.....	<i>Secretary.....</i>	Denver, Colo.

School Administration.

JOHN E. BRANDEGEE.....	<i>President.....</i>	Utica, N. Y.
KENTON CHICKERING.....	<i>First Vice-President.....</i>	Oil City, Pa.
CHARLES QUARLES.....	<i>Second Vice-President.....</i>	Milwaukee, Wis.
WM. GEO. BRUCE.....	<i>Secretary.....</i>	Milwaukee, Wis.
WM. S. MACK.....	<i>Chairman Executive Committee</i>	Aurora, Ill.

Library.

L. D. HARVEY.....	<i>President.....</i>	Milwaukee, Wis.
J. H. VANSICKLE.....	<i>Vice-President.....</i>	Denver, Colo.
Miss MYRTELLA AVERY.....	<i>Secretary.....</i>	Albany, N. Y.

Deaf, Blind, and Feeble-minded.

JOSEPH C. GORDON.....	<i>President.....</i>	Washington, D. C.
Miss SARAH FULLER.....	<i>Vice-President.....</i>	Boston, Mass.
Miss MARY McCOWEN.....	<i>Secretary and Treasurer.....</i>	Chicago, Ill.

TREASURER'S REPORT

TO THE

NATIONAL EDUCATIONAL ASSOCIATION

JULY 1, 1896, TO JULY 1, 1897.

MEETING AT BUFFALO, N. Y., 1896.

I. C. McNeill, Treasurer, in Account with the National Educational Association

Dr.

To cash on Comptroller's checks issued in 1896, on account of balance in Union National Bank of Denver.....	\$ 132.15
To cash memberships, Buffalo meeting.....	1,146.00
To New York advanced memberships.....	2,358.00
To other cash memberships, collected during year.....	20.00
To memberships, Department of Superintendence, Indianapolis.....	404.00
To income on permanent investments.....	2,751.27
To sale of volumes, St. Louis Public Library.....	37.25
To collection of annual dues by Secretary Shepard, active memberships.....	1,066.25
To memberships from steamship lines.....	876.00
To memberships from railroads.....	11,749.95
	<hr/>
	\$20,540.87
* To error in old balances, including amount unavailable.....	540.62
* To error in report last year.....	.03
	<hr/>
Total.....	<u>\$21,081.52</u>

Cr.

By cash advanced by Treasurer—Report of 1896 :	
Unavailable funds in Union National Bank of Denver.....	\$ 528.59
Overdrafts paid.....	134.73
	<hr/>
	\$ 663.32
By expenses incurred during Buffalo meeting	
Treasurer's clerks during Buffalo meeting (736).....	\$ 842.33
Expense of Secretary's office (745).....	120.09
Clerical work, auditing Treasurer's books (728).....	8.00
Supplies for typewriting (713).....	26.60
Stenographer's service (708).....	113.75
State managers (747, 776, 716, 722, 723, 724, 735, 726, 725).....	659.04
Departments, including Department Superintendence at Indianapolis (768, 738, 751, 755, 757, 775).....	260.29
Memberships refunded (742, 780).....	268.00
	<hr/>
	\$ 2,298.10
By printing volumes and proceedings :	
Printing (706, 707, 709, 720, 749, 760, 762, 763).....	\$ 4,611.24
Express and freight (769, 727, 750, 761, 759, 765).....	1,399.85
Indexing (748, 732).....	342.70
	<hr/>
	\$ 6,353.79
By Committee of Twelve :	
Henry Sabin (729).....	\$ 31.15
Henry Sabin (746).....	1,349.77
Henry Sabin (771).....	276.35
	<hr/>
	\$ 1,657.27

TREASURER'S REPORT

17

By officers' expenses, stationery, postage, telegrams, traveling, etc.:

N. C. Dougherty (744, 705, 712).....	\$ 443.40
C. R. Skinner (777, 773).....	446.52
Irwin Shepard (731, 752, 766, 778).....	652.53
I. C. McNeill (730, 764, 779).....	170.25
	<u>\$ 1,712.70</u>

By Board of Trustees:

H. A. Tarbell (714).....	\$ 33.62
J. Ormond Wilson (721, 733, 718).....	31.01
A. G. Lane (781).....	63.35
	<u>\$ 127.98</u>

By paid Board of Trustees for permanent investments (743)..... \$ 4,000.00

By transfer of permanent funds (770)..... 300.00

\$ 4,300.00

By officers' salaries:

Zalmon Richards, former custodian (710, 711).....	\$ 325.00
Irwin Shepard, Secretary (754, 767).....	1,000.00
I. C. McNeill, Treasurer (756, 782).....	750.00
	<u>\$ 2,075.00</u>

Joint agency expenses:

F. C. Donald, Commissioner Central Traffic Association (734).....	\$ 500.00
F. C. Donald, redeeming ticket (774).....	19.00
Expenses at Buffalo (736).....	90.00
Joint agent at Indianapolis (753).....	11.00
	<u>\$ 620.00</u>

By other expenses:

Rent of depository at Washington (772, 719, 758).....	\$ 75.00
Rent of safety box at First National Bank of Superior (715).....	15.00
Fidelity and Deposit Co., Treasurer's bond (717).....	50.00
	<u>\$ 140.00</u>

Total disbursed.....	<u><u>\$19,948.16</u></u>
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SUMMARY.

By total disbursed as above.....	\$19,948.16
* By short credit in report 1896.....	20.50
* By balance, cash unavailable (Denver).....	\$ 528.59
By balance, cash in hand.....	584.27
	<u>1,112.86</u>
Total.....	<u><u>\$21,081.52</u></u>

NOTE: The figures in marks of parenthesis refer to the numbers of the orders issued by the Chairman of the Board of Trustees upon the Treasurer for payment of audited bills.

* The corrections in the above report were indicated by Charles C. Hoyt, accountant, who examined the books and accounts kept by Treasurers, and by the late N. A. Calkins, who, as Chairman of the Board of Trustees, received and disbursed current funds of the association. Since the Denver meeting the current funds of the association have been handled by the Treasurer and the permanent funds by the Board of Trustees.

I. C. McNEILL, Treasurer.

Directors by Election.—Continued.*Western Division.—Continued.*

Utah.....	J. M. TANNER.....	Logan.
Nevada.....	J. E. STUBBS.....	Reno.
Idaho.....	J. C. BLACK.....	Albion.
Washington.....	R. S. BINGHAM.....	Tacoma.
Oregon.....	E. B. McELROY.....	Eugene.
California.....	CHARLES H. KEYES.....	Berkeley.

DEPARTMENT OFFICERS.**National Council.**

CHARLES DE GARMO.....	<i>President</i>	Swarthmore, Pa.
WM. F. KING.....	<i>Vice-President</i>	Mt. Vernon, Ia.
MISS BETTIE A. DUTTON.....	<i>Secretary</i>	Cleveland, O.
B. A. HINSDALE.....	<i>Executive Committee</i>	Ann Arbor, Mich.
J. H. PHILLIPS.....	<i>Executive Committee</i>	Birmingham, Ala.
CHARLES H. KEYES.....	<i>Executive Committee</i>	Holyoke, Mass.
WALTER L. HERVEY.....	<i>Executive Committee</i>	New York, N. Y.

Kindergarten.

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MRS. JENNY B. MERRILL.....	<i>Vice-President</i>	New York, N. Y.
MISS MARY F. HALL.....	<i>Secretary</i>	Milwaukee, Wis.

Elementary.

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MRS. MAY WRIGHT SEWALL.....	<i>Vice-President</i>	Indianapolis, Ind.
E. G. COOLEY.....	<i>Secretary</i>	LaGrange, Ill.

Higher.

R. H. JESSE.....	<i>President</i>	Columbia, Mo.
A. T. ORMOND.....	<i>Vice-President</i>	Princeton, N. J.
HENRY WADE ROGERS.....	<i>Secretary</i>	Evanston, Ill.

Normal.

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MISS ROSE C. SWART.....	<i>Vice-President</i>	Oshkosh, Wis.
F. B. PALMER.....	<i>Secretary</i>	Fredonia, N. Y.

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Music.

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MRS. EMMA A. THOMAS.....	<i>Vice-President</i>	Detroit, Mich.
MISS S. LILLIAN BYINGTON.....	<i>Secretary</i>	Moline, Ill.

By officers: ~~expenses~~ ~~amount~~

N. C. Lounsbury ~~amount~~

C. R. Schenck ~~amount~~

Irwin Schenck ~~amount~~

I. C. McNeil ~~amount~~

By Board of Trustees

H. A. Tarver ~~amount~~

J. C. Lounsbury ~~amount~~

A. C. Lounsbury ~~amount~~

By paid Board of Trustees ~~amount~~

By transfer of ~~amount~~

By officers: ~~amount~~

Zachariah Lounsbury ~~amount~~

Irwin Schenck ~~amount~~

I. C. McNeil ~~amount~~

Joint agents: ~~amount~~

F. C. Lounsbury ~~amount~~

F. C. Lounsbury ~~amount~~

Expenses in June ~~amount~~

Joint agent in December 1897 ~~amount~~

By other expenses

Remit of deposits in Washington ~~amount~~

Remit of salary for a Free Will Contribution ~~amount~~

Fidelity and Deposit Co. ~~amount~~

Total disbursed

- By total disbursed as above
- By short credit in report of
- By balance, cash receivable from
- By balance, cash in hand

Interest payable	Bond due
January and July	July 1, 1900
March	One due each year, March 1
January and July	February 1, 1900
January and July	July 1, 1900
Jan'y 31 and July 31	August 31, 1900
January and March	1900
January and July	1, 1900
April and July	1, 1900
July and October	1, 1900
1,000 for collection	
\$22,500	

Total	
1,000	6
1,000	6
1,000	6
1,000	6
1,000	5 1/2
1,000	6
1,000	6
1,000	7
1,000	
\$22,500	

NATIONAL EDUCATIONAL ASSOCIATION OF THE UNITED STATES.

OFFICERS FOR 1897-98.

GENERAL ASSOCIATION.

JAMES M. GREENWOOD.....	<i>President</i>	Kansas City, Mo.
IRWIN SHEPARD	<i>Secretary</i>	Winona, Minn.
I. C. MCNEILL.....	<i>Treasurer</i>	West Superior, Wis.

VICE-PRESIDENTS.

CHARLES R. SKINNER, Albany, N. Y.	L. D. HARVEY, Milwaukee, Wis.
GEO. J. RAMSEY, Clinton, La.	W. W. STETSON, Auburn, Me.
J. L. HOLLOWAY, Fort Smith, Ark.	HIRAM HADLEY, Albuquerque, N. M.
E. ORAM LYTE, Milledale, Pa.	W. H. H. BEADLE, Madison, S. D.
JAMES M. RALSTON, Asbury Park, N. J.	JOHN H. MCCAHAN, Baltimore, Md.
MISS MARGARET W. SUTHERLAND, Columbus, O.	S. T. BLACK, Sacramento, Cal.

BOARD OF TRUSTEES.

(See Art. IV., Secs. 9 and 10, of the Constitution.)

ALBERT G. LANE.....	<i>Chairman</i>	Chicago, Ill.
NICHOLAS MURRAY BUTLER.....	<i>Secretary</i>	New York, N. Y.
NICHOLAS MURRAY BUTLER.....	New York, N. Y.....	Term expires July, 1898.
ALBERT G. LANE.....	Chicago, Ill.....	Term expires July, 1899.
J. ORMOND WILSON.....	Washington, D. C.....	Term expires July, 1900.
F. LOUIS SOLDAN.....	St. Louis, Mo.....	Term expires July, 1901.
JAMES M. GREENWOOD.....	Kansas City, Mo.....	<i>Ex officio</i>

EXECUTIVE COMMITTEE.

(See Art. IV., Sec. 2, of the Constitution.)

JAMES M. GREENWOOD.....	<i>President</i>	Kansas City, Mo.
CHARLES R. SKINNER	<i>First Vice-President</i>	Albany, N. Y.
IRWIN SHEPARD	<i>Secretary</i>	Winona, Minn.
I. C. MCNEILL.....	<i>Treasurer</i>	West Superior, Wis.
ALBERT G. LANE.....	<i>Chairman Board of Trustees</i> ...	Chicago, Ill.

BOARD OF DIRECTORS.

Directors *Ex Officio*.

(See Art. IV., Sec. 2, of the Constitution.)

JAMES M. GREENWOOD, Kansas City, Mo.	IRWIN SHEPARD, Winona, Minn.
CHARLES R. SKINNER, Albany, N. Y.	I. C. MCNEILL, West Superior, Wis.
ALBERT G. LANE, Chicago, Ill.	

Life Directors.

(See Art. IV., Sec. 2, of the Constitution.)

BICKNELL, THOMAS W., Providence, R. I.	GRAHAM, H. A., Ontonagon, Mich.
BROWN, LEROY D., Santa Monica, Cal.	GREENWOOD, J. M., Kansas City, Mo.
BUTLER, NICHOLAS MURRAY, New York, N. Y.	GOVE, AARON, Denver, Colo.
CANFIELD, JAMES H., Columbus, O.	HALL, CALSB G., New Berlin, N. Y.
COOK, E. H., Flushing, N. Y.	HARRIS, W. T., Washington, D. C.
DAY, L. W., Cleveland, O.	HUNT, MARY H., Boston, Mass.
DOUGHERTY, NEWTON C., Peoria, Ill.	JEWETT, A. V., Abilene, Kan.
FAIRCHILD, GEORGE T., Manhattan, Kan.	LANE, Albert G., Chicago, Ill.
GARRETT, W. R., Nashville, Tenn.	MARBLE, Albert P., New York, N. Y.

Life Directors.—Continued.

MARSHALL, T. MARCELLUS, Hyden, Ky.	SHELDON, W. E., Boston, Mass.
NORTHROP, B. G., Clinton, Conn.	SKINNER, CHARLES R., Albany, N. Y.
PARKER, CHAS. I., South Chicago, Ill.	SMART, JAMES H., Lafayette, Ind.
PHELPS, W. F., St. Paul, Minn.	SOLDAN, F. LOUIS, St. Louis, Mo.
PIKE, J., Jerseyville, Ill.	STRATTON, C. C., University Park, Ore.
PICKARD, J. L., Iowa City, Ia.	TAYLOR, A. R., Emporia, Kan.
RICHARDS, ZALMON, Washington, D. C.	WHITE, CHARLES G., Lake Linden, Mich.
RICKOFF, ANDREW J., Berkeley, Cal.	WHITE, E. E., Columbus, O.
WILSON, J. ORMOND, Washington, D. C.	

*Directors by Election.**North Atlantic Division.*

Maine.....	JOHN S. LOCKE.....	Saco.
New Hampshire.....	J. A. RUSSELL	Plymouth.
Vermont.....	MASON S. STONE.....	Montpelier.
Massachusetts.....	A. G. BOYDEN.....	Bridgewater.
Rhode Island.....	GILMAN C. FISHER.....	Pawtucket.
Connecticut.....	F. E. HOWARD.....	Bridgeport.
New York.....	A. S. DOWNING.....	Albany.
New Jersey.....	JAMES M. GREEN.....	Trenton.

South Atlantic Division.

Pennsylvania.....	S. T. SKIDMORE.....	Philadelphia.
Delaware.....	A. H. BERLIN.....	Wilmington.
Maryland.....	HENRY A. WISE.....	Baltimore.
District of Columbia.....	W. B. POWELL.....	Washington.
Virginia.....	E. C. GLASS.....	Lynchburgh.
West Virginia.....	W. H. ANDERSON.....	Wheeling.
North Carolina.....	CHARLES D. MCIVER.....	Greensboro.
South Carolina.....	W. H. HAND.....	Chester.
Florida.....	OSCAR CLUTE.....	Lake City.

South Central Division.

Kentucky.....	E. W. WEAVER.....	Paris.
Tennessee.....	WHARTON S. JONES.....	Memphis.
Georgia.....	W. M. SLATON.....	Atlanta.
Alabama.....	JOHN T. GREGORY.....	Mobile.
Mississippi.....	E. E. BASS.....	Greenville.
Louisiana.....	WARREN EASTON.....	New Orleans.
Texas.....	GEORGE T. WINSTON.....	Austin.
Oklahoma.....	DAVID R. BOVD.....	Norman.
Arkansas.....	GEORGE B. COOK.....	Hot Springs.

North Central Division.

Ohio.....	F. B. DYER.....	Madisonville.
Indiana.....	EDWARD AYRES.....	Lafayette.
Illinois.....	J. H. COLLINS.....	Springfield.
Michigan.....	HENRY R. PATTENGILL.....	Lausing.
Wisconsin.....	MISS MAE E. SCHREIBER.....	Milwaukee.
Iowa.....	W. M. BEARDSHEAR.....	Ames.
Minnesota.....	C. M. JORDAN.....	Minneapolis.
Missouri.....	JOHN R. KIRK.....	Jefferson City.
North Dakota.....	W. L. STOCKWELL.....	Grafton.
South Dakota.....	A. H. AVERY.....	Woonsocket.
Nebraska.....	C. G. PEARSE.....	Omaha.
Kansas.....	JOHN MACDONALD.....	Topeka.

Western Division.

Montana.....	J. E. KLOCK.....	Helena.
Wyoming.....	MISS ESTELLE REEL.....	Cheyenne.
Colorado.....	L. C. GREENLEE.....	Denver.
New Mexico.....	C. M. LIGHT.....	Silver City.
Arizona.....	MISS LYDIA L. HUNT.....	San Carlos.

Directors by Election.—Continued.*Western Division.—Continued.*

Utah	J. M. TANNER.....	Logan.
Nevada.....	J. E. STUBBS.....	Reno.
Idaho.....	J. C. BLACK.....	Albion.
Washington.....	R. S. BINGHAM.....	Tacoma.
Oregon.....	E. B. McELROY.....	Eugene.
California.....	CHARLES H. KEYES.....	Berkeley.

DEPARTMENT OFFICERS.**National Council.**

CHARLES DEGARMO.....	<i>President</i>	Swarthmore, Pa.
WM. F. KING.....	<i>Vice-President</i>	Mt. Vernon, Ia.
Miss BETTIE A. DUTTON.....	<i>Secretary</i>	Cleveland, O.
B. A. HINSDALE.....	<i>Executive Committee</i>	Ann Arbor, Mich.
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ALLAN DAVIS.....	<i>Chairman Executive Committee</i>	Washington, D. C.

Child Study.

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L. D. HARVEY.....	<i>President.....</i>	Milwaukee, Wis.
J. H. VANSICKLE.....	<i>Vice-President.....</i>	Denver, Colo.
Miss MYRTELLA AVERY.....	<i>Secretary.....</i>	Albany, N. Y.

Deaf, Blind, and Feeble-minded.

JOSEPH C. GORDON.....	<i>President.....</i>	Washington, D. C.
Miss SARAH FULLER.....	<i>Vice-President.....</i>	Boston, Mass.
Miss MARY McCOWEN.....	<i>Secretary and Treasurer.....</i>	Chicago, Ill.

TREASURER'S REPORT

TO THE

NATIONAL EDUCATIONAL ASSOCIATION

JULY 1, 1896, TO JULY 1, 1897.

MEETING AT BUFFALO, N. Y., 1896.

I. C. McNeill, Treasurer, in Account with the National Educational Association

DR.

To cash on Comptroller's checks issued in 1896, on account of balance in Union National Bank of Denver.....	\$ 132.15
To cash memberships, Buffalo meeting.....	1,146.00
To New York advanced memberships.....	2,358.00
To other cash memberships, collected during year.....	20.00
To memberships, Department of Superintendence, Indianapolis.....	404.00
To income on permanent investments.....	2,751.27
To sale of volumes, St. Louis Public Library.....	37.25
To collection of annual dues by Secretary Shepard, active memberships.....	1,066.25
To memberships from steamship lines.....	876.00
To memberships from railroads.....	11,749.95
	<hr/>
	\$20,540.87
* To error in old balances, including amount unavailable.....	540.62
* To error in report last year.....	.03
	<hr/>
Total.....	<u>\$21,081.52</u>

CR.

By cash advanced by Treasurer—Report of 1896 :

Unavailable funds in Union National Bank of Denver.....	\$ 528.59
Overdrafts paid.....	134.73
	<hr/>
	\$ 663.32

By expenses incurred during Buffalo meeting

Treasurer's clerks during Buffalo meeting (736).....	\$ 842.33
Expense of Secretary's office (745).....	120.09
Clerical work, auditing Treasurer's books (728).....	8.00
Supplies for typewriting (713).....	26.60
Stenographer's service (708).....	113.75
State managers (747, 776, 716, 722, 723, 724, 735, 726, 725).....	659.04
Departments, including Department Superintendence at Indianapolis (768, 738, 751, 755, 757, 775).....	260.29
Memberships refunded (742, 780).....	268.00
	<hr/>
	\$ 2,298.10

By printing volumes and proceedings :

Printing (706, 707, 709, 720, 749, 760, 762, 763).....	\$ 4,611.24
Express and freight (769, 727, 750, 761, 759, 765).....	1,399.85
Indexing (748, 732).....	342.70
	<hr/>
	\$ 6,353.79

By Committee of Twelve :

Henry Sabin (729).....	\$ 31.15
Henry Sabin (746).....	1,349.77
Henry Sabin (771).....	276.35
	<hr/>
	\$ 1,657.27

TREASURER'S REPORT

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By officers' expenses, stationery, postage, telegrams, traveling, etc.:

N. C. Dougherty (744, 705, 712)	\$ 443.40
C. R. Skinner (777, 773)	446.52
Irwin Shepard (731, 752, 766, 778)	652.53
I. C. McNeill (730, 764, 779)	170.25
	\$ 1,712.70

By Board of Trustees:

H. A. Tarbell (714)	\$ 33.62
J. Ormond Wilson (721, 733, 718)	31.01
A. G. Lane (781)	63.35
	\$ 127.98

By paid Board of Trustees for permanent investments (743) \$ 4,000.00

By transfer of permanent funds (770) 300.00

\$ 4,300.00

By officers' salaries:

Zalmon Richards, former custodian (710, 711)	\$ 325.00
Irwin Shepard, Secretary (754, 762)	1,000.00
I. C. McNeill, Treasurer (756, 782)	750.00
	\$ 2,075.00

Joint agency expenses:

F. C. Donald, Commissioner Central Traffic Association (734)	\$ 500.00
F. C. Donald, redeeming ticket (774)	19.00
Expenses at Buffalo (736)	90.00
Joint agent at Indianapolis (753)	11.00
	\$ 620.00

By other expenses:

Rent of depository at Washington (772, 719, 758)	\$ 75.00
Rent of safety box at First National Bank of Superior (715)	15.00
Fidelity and Deposit Co., Treasurer's bond (717)	50.00
	\$ 140.00

Total disbursed \$19,948.16

SUMMARY.

By total disbursed as above	\$19,948.16
* By short credit in report 1896	20.50
* By balance, cash unavailable (Denver)	\$ 528.59
By balance, cash in hand	584.27
	1,112.86
Total	<u><u>\$21,081.52</u></u>

NOTE: The figures in marks of parenthesis refer to the numbers of the orders issued by the Chairman of the Board of Trustees upon the Treasurer for payment of audited bills.

* The corrections in the above report were indicated by Charles C. Hoyt, accountant, who examined the books and accounts kept by Treasurers, and by the late N. A. Calkins, who, as Chairman of the Board of Trustees, received and disbursed current funds of the association. Since the Denver meeting the current funds of the association have been handled by the Treasurer and the permanent funds by the Board of Trustees.

I. C. McNeill, Treasurer.

Forty-nine votes were cast, of which Mr. Soldan received 41, and Mr. Tarbell, 8. Whereupon F. Louis Soldan was declared duly elected as a member of the Board of Trustees.

Secretary Shepard presented the following resolution of Superintendent Denfeld, of Minnesota, referred to the board at this morning's session of the association, as follows :

WHEREAS, The President of this association issued a circular to the members asking for an expression of opinion as to the manner of choosing the members of the Committee on Nominations; therefore, in order to give opportunity for an expression of opinion on the subject, be it

Resolved, That the members of the Committee on Nominations shall hereafter be chosen by the active members from the several states, and that each state shall be entitled to one member of said committee; and be it further

Resolved, That at the time of choosing the members of the said Committee on Nominations the active members from each state shall elect one director of this association.

Director White, of Ohio, moved to report the resolution of Superintendent Denfeld back to the association, as follows :

It is hereby recommended by the Board of Directors that By-Law 1 of this association be amended to read as follows :

1. At the first session of each annual meeting of the association there shall be appointed by the President a committee on resolutions; and at the third session of such meeting there shall be appointed a committee on nominations, consisting of one member from each state represented, the same to be appointed by the President on the nomination of a majority of the active members in attendance from such state, provided, however, that such appointment shall be made by the President, without such nomination, when less than three active members from a state are in attendance, and also when a majority of the active members in attendance from any one state shall fail to make a nomination.

The meeting of active members to nominate members of the nominating committee shall be held at two P. M. on the second day of the meeting, at such place as shall be announced in the general programme.)

Director Taylor submitted the following as a substitute for the proposed report of Dr. White :

The member of the nominating committee from the respective states and territories shall be named by the active members of the association at meetings at the various state and territorial headquarters at 2:30 P. M. of the second day of the meeting of the general association.

The retiring director, or, in his absence, the state manager, or, in his absence, someone named by a majority vote of the members present, shall preside at said meeting. The vote shall be by ballot, only active members being allowed to vote. The possession of the active-membership badge shall be regarded as satisfactory evidence of eligibility to vote.

The result of the ballot shall be certified in writing to the Secretary of the general association by the presiding officer above mentioned, and in case no member of the committee is named from any state or territory, the nominating committee shall have power to fill the vacancy from the active members present from said state.

On a vote the substitute of Director Taylor was lost, and the report of Director White was unanimously adopted.

Mr. J. C. Gordon submitted the following petition for the establishment of a new department, as follows :

MILWAUKEE, Wis., July 8, 1897.

TO THE HONORABLE BOARD OF DIRECTORS OF THE NATIONAL EDUCATIONAL ASSOCIATION.

Gentlemen: In transmitting the petition herewith enclosed for the organization of a department as herein stated, it may be proper to say that the primary object is to correct an irregularity on the part of the board meeting in Buffalo. Incidentally it is our desire to amend the name of the new department. The name authorized by the last board is offensive to many sensitive persons, and is too indefinite to be descriptive. The name now proposed obviates all objections upon that score. Practically it is now proposed to have a department in the interests of the education of deaf children, blind children, and feeble-minded children, all of which classes require trained specialists for their instruction. One advantage of the proposed organization will be to emphasize the importance of special training as a *sine qua non* to employment as an instructor. It will have a tendency to prevent the forcing of incompetent persons upon these schools by reason of political interference or personal favoritism on the part of boards of trustees.

At the present time probably the instructors of the deaf come nearer forming a specialized class of instructors of high special attainments than any other class of teachers.

The tendency is to employ none but teachers who have been specially trained for this work. The tenure of such teachers is very much longer than in the ordinary public schools, and one result of this is the formation of a body of remarkably intelligent instructors.

They have long maintained organizations for their own benefit, such as that of the American Association to Promote the Teaching of Speech to the Deaf, the Convention of American Instructors of the Deaf, the National Association to Promote the Auricular Teaching of the Deaf, the Society to Promote Child Study among Deaf Children, the Association of Kindergarteners of the Deaf, the Conference of Superintendents of Schools for the Deaf. These various organizations, or the membership thereof, have long maintained an educational journal, the *American Annals*, which is circulated throughout the world, and is a storehouse of information upon the specific topics relating to the instruction of the deaf, and is also recognized as one of the most creditable educational publications in existence. The educators of the blind are not so well organized, though they do have their conventions. The educators of the feeble-minded are, it is understood, practically without organization. The proposed department will not interfere in any way with existing organizations, but will tend to unify them, to harmonize their interests, and to bring their membership into closer touch with the leaders of educational thought and action in the National Educational Association.

If the petition is granted, the work of the department at present will be chiefly in the hands of the educators of the deaf, but it will be their policy to encourage the educators of the blind and of the feeble-minded to participate upon equal terms with themselves in the advantages of a national organization, and, when necessary, such division of time will be made as may prove satisfactory in the arrangement of programmes to all the parties in interest.

In conclusion, I wish to call the attention of the board to the highly successful meeting of educators of the deaf which has been held as a round-table, instead of a department, by authority of the national association. The programme was valuable and interesting, the participants were representative men and women from different sections of the country, the discussions were upon a high plane, and the attendance was gratifying, the large room being filled from first to last.

Believing, as I do, that the proposed department will be mutually advantageous to the association and to the educators, I am personally anxious to bring into closer touch with the larger educational movements of the day, I hope and pray that the petition herewith enclosed may be granted.

J. C. GORDON,
*Chairman Round-table, N. E. A.; Prof. Math., etc.,
National College for the Deaf, Washington, D. C.;
etc.*

MILWAUKEE, WIS., July 8, 1897

TO THE HONORABLE BOARD OF DIRECTORS, NATIONAL EDUCATIONAL ASSOCIATION.

WHEREAS, A petition signed by educators of the deaf and of the blind and other members of the association was presented to the Board of Directors at the Buffalo meeting, asking for the organization of a department for the benefit of the classes herein named, and this petition was granted on the 9th of July, 1896; and

WHEREAS, This action was afterwards found to be irregular, therefore we, the undersigned, active members of the National Educational Association, do renew the request in proper form, and do hereby petition the board to authorize the organization of a department for those interested in the instruction and training of the deaf, and blind, and pupils whose education is handicapped by abnormal physical or mental conditions; and we do further request that this organization be named the "Department for the Education of Classes requiring Special Methods of Instruction," said department being in effect the sixteenth department of the association.

ALEXANDER GRAHAM BELL,
*Director of American Association to Promote the
Teaching of Speech to the Deaf;*
AND FORTY-ONE OTHERS.

On motion of Director Butler, the name of the department was ordered to read "Department for the Education of the Deaf, Blind, and Feeble-Minded," and as thus amended the petition was allowed.

Director Butler moved the adoption of the following resolutions:

Resolved, That an appropriation of \$750 be and the same is hereby authorized to be paid to the Treasurer of the National Educational Association in equal semi-annual payments, for the purpose of securing clerical assistance for the Treasurer, in the discharge of the duties of his office, and for such other miscellaneous expenses as are necessarily connected therewith.

Resolved, That for the year 1897-98 an appropriation of fifteen hundred dollars (\$1,500) be and is hereby made to the Secretary of the National Educational Association, to be paid in three equal installments, as compensation for the performance of the duties of his office, which duties shall include the editing of the volume of proceedings.

The resolutions were duly seconded, and unanimously adopted.

The board received invitations to hold the next annual meeting of the association in Washington, D. C., Omaha, Neb., Los Angeles, Cal., and Salt Lake City, Utah.

An informal ballot was taken, with the following result :

	1st choice	2d choice	3d choice	Total
Washington, D. C.....	8	10	10	28
Los Angeles, Cal.....	7	6	8	21
Salt Lake City, Utah	9	10	5	24
Omaha, Neb.....	10	5	7	22

On motion, all petitions and the entire subject of selection of place for holding the next meeting were referred to the Executive Committee, with power to act.

The board adjourned *sine die*.

JAMES M. GREENWOOD,
President.

IRWIN SHEPARD,
Secretary.

GENERAL SESSIONS OF THE ASSOCIATION.

ADDRESSES OF WELCOME.

HIS EXCELLENCY, EDWARD SCHOFIELD, GOVERNOR OF WISCONSIN.

Ladies and Gentlemen of the National Educational Association:

I bid you a hearty welcome in the name of the state of Wisconsin. We are proud to have in our midst this large body of representative people from almost every state in the Union. If we may not flatter ourselves that you are coming here for the second time, in so comparatively short a period, because of our superior educational atmosphere, we can at least feel sure that you were made welcome on your first visit.

If I should attempt to enumerate all the good things we have in Wisconsin that are calculated to please people of culture, it would take me a long time—but all these you will discover for yourselves.

Again I bid you a hearty welcome.

J. Q. EMERY, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION, WISCONSIN.

Members of the National Educational Association:

I extend to you the hearty welcome of the teachers and school officers of Wisconsin, with sincere cordiality and hospitality, and with open hearts and homes. We are glad that you have come to Wisconsin on this occasion of your thirty-sixth anniversary. We are highly honored in having this distinguished national body of educators with us.

The session of this association held at Madison, Wis., thirteen years ago, inaugurated the era of vast numbers in membership and attendance, and a corresponding increase in the power and influence of the association.

On that occasion, replying to the welcome by Governor Rusk and others, President Bicknell made this statement and prophecy: "You, therefore, your Excellency and ladies and gentlemen, have the credit and the honor, and the glory it may be, of having set in motion, through your large-hearted invitations and the splendid opportunities afforded us here, forces and influences which stir the heart of this nation from center to circumference, and shall send forward a great national movement from this meeting, which shall build up an educational sentiment truer and deeper and more lively than has ever before been felt on this continent."

Those words of prophecy have had liberal fulfillment; and so the teachers and school officers of Wisconsin take just pride in feeling that they have made some contribution to the mighty forces and vast influences for good which this association now exerts upon the great cause of universal education, and so upon our national life.

Upon the occasion to which I have referred one of the speakers in his address of welcome told how the entire state of Wisconsin was that day stirred by a great and an unusual joy, that the young men and women who represented the then coming generation of Wisconsin educators were to have poured out upon them your spirit. The speaker did not ask for a mere sprinkling of diluted platitudes; but he asked that those young men and women might be led into the great deeps of your powers and experiences; that you should leave such an impress upon that generation that it should take up the educational work and excel—far excel—its predecessor.

I believe that what that speaker then so earnestly and so eloquently sought from that great and historic meeting has been splendidly realized. That generation of Wisconsin educators was baptized into a wonder-working spirit, and it rose into a new educational life.

For evidence of this I point to the remarkable growth of our magnificent state university, its large and able faculty, its prodigious growth in material equipment, and in its more than 1,600 students, increased from less than 400 in 1884.

I point to the phenomenal expansion of our normal-school system, grown from four state normal schools in 1884, enrolling 1,235 students and graduating less than 100 from the different courses, to seven large schools in 1897, enrolling a little less than 4,000 students and graduating 450 from the different courses. The forty-four persons comprising the faculties in 1884 have been increased in number to 144 in 1897.

I point to the marvelous development of our free high-school system. The 115 high schools of 1884 have been nearly doubled. The number of teachers employed has more than doubled. The enrollment of less than 8,000 high-school pupils in 1884 has been increased to 17,000 in 1896; the graduates from less than 500, to 1,500, 50 per cent. of whom enter normal schools, colleges, or the university. The advance in standard of qualifications for teachers, and the improvements in the housing and other material equipments, have more than equaled the numerical increase, and the establishment of manual-training departments has been inaugurated.

I point to what is the greatest cause of gratification, the splendid progress made in our common schools in material appliances, and in educational qualifications and professional training of teachers. The Wisconsin school library idea has been originated and so effectively developed that

now even the humblest district school in the state is guaranteed annually a collection of choice inspirational books.

The efficiency of our system of county superintendency has been greatly increased through the force of public opinion, that has secured a law fixing an educational qualification as a condition for holding that office, and our system of teachers' institutes has more than doubled in extent.

The growth of institutions in efficiency and in capacity for caring for the defective classes — the blind, the deaf, the feeble-minded — has been fully equal to that of other branches of our educational organism. Indeed, the establishment of our day schools for the deaf is a direct outgrowth of the discussion on that subject at the great meeting of this association in Madison in 1884.

But great as has been the educational advancement in Wisconsin in these thirteen years, still greater progress is needed. The motto of Wisconsin is "Forward." The generation of teachers of thirteen years ago has been succeeded by another. We were not wholly unselfish in urging you to hold this session in Wisconsin. What was done by this association for the generation of teachers of 1884 we want to have done now with still greater force for the teachers of 1897. It is our earnest hope and wish that through the voice of the distinguished speakers who are to occupy this platform the command shall be given, and in tones of such clearness, force, and persuasiveness as to be heard and obeyed not only by the teachers of Wisconsin, but by the teachers in every state and territory throughout this vast republic. Teachers of twenty millions of pupils — Forward!

HON. W. G. RAUSCHENBERGER, MAYOR OF MILWAUKEE.

Mr. Chairman, Ladies and Gentlemen, Members of the National Educational Association:

One of the functions of the office of mayor seems to be to speak for the city and act as a verbal host, to express, as occasion shall require, the usual welcome of her citizens to visiting conventions and societies.

Milwaukee is proud to be selected as the place of your meeting. She rejoices in the opportunity of showing her faith in popular education by honoring its agents and ministers. She has set her house in order and expected your coming as the bride waits for the groom; and she extends the hands and opens the hearts of her citizens to you — full of sincere and joyful welcome.

Milwaukee is sometimes described (I believe in some school textbooks) as the beer city. The fact so stated is short of the whole truth — as our peaceful, temperate, law-abiding citizens well know. Milwaukee manufactures beer, it is true, because other cities drink it, and

we add a blessing to the sin, if sin it be, by providing for their insatiable demands the best article the world affords.

This is also known as a "German city." In certain respects, and comparatively speaking, a larger proportion of our population know exactly the nationality of their parents than do the good people of Detroit, Buffalo, Chicago, or the twin gems of the west, St. Paul and Minneapolis. As to our derivation, we are dead sure of it. A large number of the best people here are not ashamed of this definite knowledge of their progenitors. They do not hesitate to avow it in their welcome to you American born schoolmasters; for if I am not mistaken, you are fully aware that your pedagogic carpetbags, so to speak, are as well stuffed with the doctrines and teachings of the German schoolmasters as the baggage of the latest arriving emigrant is with reminders of the fatherland.

In Germany men receive their preparation to become Americans by the nature of their education; for they are educated to hold, above the commanders of armies, above the ministers of the creeds, above the votaries of art or the leaders in politics, the schoolmaster. I would, therefore, caution you that our citizens hold one thing in higher esteem than their derivation, and that is their Americanism.

However considerate they may be of the traditions of their fatherland, they are consecrated to the land of their children, and loyally committed to their destiny as American citizens. They enter into your sympathies; and with you as witnesses they confirm their profession of faith in this association, of faith in the great mission which gives you the title and right to be received as the organized exponent of those great forces which are to make the America and the Americans of the future. We all, without party or partisanship, believe in education. There is no sectarianism in our simple faith. We believe in the American public school as the ideal American institution; and we believe that you, who are the leaders of its destiny, are deserving of a hearty patriotic welcome.

I claim Milwaukee as an American city. Thirty-five years ago she sent her battalions to verify it; and their patriotic declarations have been signed and eternally sealed on many a southern battle field. The blood of her sons flowed to consecrate Gettysburg. Their loyalty endured the terrors of the Wilderness. They shouted it from Lookout Mountain, around the battlements of Atlanta, and "onward to the sea." And when all but the unreturning brave gathered again about their Milwaukee homes, they found Milwaukee women engaged in founding by munificent subscription and loyal labor the great national home for disabled veterans. This was thirty-two years ago. Milwaukeeans were Americans then. And today we wish you, receiving you as the marshals of that grand army enrolled in the cause which is to guarantee and perpetuate the safety of the Republic, we wish you to accept from us a hearty, loyal American welcome.

H. O. R. SIEFERT, SUPERINTENDENT OF SCHOOLS, MILWAUKEE.

Mr. President, Ladies and Gentlemen of the National Educational Association :

As the representative of the teachers of the public schools of this city, I extend to you a most hearty welcome.

We feel deeply the honor you have conferred upon us by choosing Milwaukee for the place of your thirty-sixth convention. We rejoice in your coming to us, because we need you "to elevate the character and advance the interest of the profession of teaching and to promote the cause of popular education" in this community. Not that we have been idle, or indifferent to the advancement of education, but in this period of electric development, when the progress of the human race is greater in ten years than it formerly was in fifty, the educator needs the life-giving influence which comes through the personal contact with those whose love is not for gold and vainglory, but for the young children of whom the great teacher said, "Suffer the little children to come unto me, and forbid them not, for of such is the kingdom of God."

A timely word from a sincere man never fails to influence the mind for good, and the magnetism emanating from a great soul thrills the fibers and swells the heart as no printed word can do.

We shall learn from you many new things. We shall be filled with fresh enthusiasm for our noble calling. We shall carry with us into our schoolrooms the new ideas with which you will inspire us, and 35,000 children will reap the benefit of our contact with you.

Milwaukee is largely a German city, and the Germans have always appreciated education. They have proved it in this country by establishing schools wherever they were needed and by supporting those already established. They honor their teachers; they look upon them not merely as instructors, but as associates in bringing up their children, and inspiring them with what is good and true and beautiful.

Pestalozzi and Froebel and Herbart are no strangers to the American teacher. The new education was their education, the new methods were their methods, and they are today perhaps more appreciated in this country than in their own. Is not Froebel's kindergarten the foundation of the new education? And where do we find more kindergartens than in America? In this city alone there are forty, with an attendance of over 4,000 children. It is the same elsewhere, and, though Froebel's body lies molding in the grave, his soul goes marching on.

There is no doubt in my mind but that the educational system of this country, founded on the doctrines and experiences of the great men of the past, will, through the efforts of the American educators, develop into a structure of such grandeur as the world has never seen.

Many of you have come long distances with an honest desire to get the benefits of this great gathering of educators ; may you reap the blessings of your devotion, if not in goods of this world, in new inspiration, in feeling that you are better prepared to follow your responsible calling, and in the blessed conviction that you have added to your ability to do good to mankind.

May your deliberations be crowned with success, and may you enjoy your sojourn with us as your labors deserve. And when you have gone hence we shall remember with grateful hearts the welcome guests that gave much more than they received.

RESPONSES.

HON. CHARLES R. SKINNER, ALBANY, N. Y., PRESIDENT OF THE ASSOCIATION.

Mr. Chairman, Teachers and Friends :

The teachers of the country occupy Milwaukee tonight under the inspiration of an army that has captured a city. Mr. Chairman, the state of Wisconsin and city of Milwaukee, many months ago, promised us a warm reception, and a royal welcome. You promised to make us happy if we would hold our meeting here, and right royally have you redeemed your promise. We thank you, and congratulate you upon the completeness of the arrangements made for the accommodation of those attending this meeting. Those who know Milwaukee best know that you are famous for your excellent schools, for your churches, for your happy homes. Hereafter you will be famous among all friends of education throughout the country for your hospitality. You have assured us in gracious words that you are glad we came among you. If at the close of the week you can say with as much heartiness that you are sorry to have us go away, then we shall feel that our visit has been mutually agreeable. It is sometimes difficult to express in fitting words our appreciation of the welcome extended, and therefore we have summoned from the four quarters of the Republic those who will speak words which have been especially prepared for you.

A. E. WINSHIP, BOSTON, MASS., PRESIDENT, AMERICAN INSTITUTE
OF INSTRUCTION.

Mr. President and Gentlemen of the Welcoming Committee :

It is given to no man from the East, the West, the North, or the South to voice a response to the welcome of the state and municipality of the

educational leaders of state and city, for this audience, the largest educational audience ever assembled, is its own response. It is an appreciated honor to represent the East and to speak for the American Institute of Instruction, which was organized in Boston by friends of education from the New England and middle states, from Virginia, Kentucky, and Ohio, the year that the streets were staked out in the village of Chicago.

His honor the mayor has reminded us that this is eminently a German city, and that it is pre-eminently an American city, as the decorations testify; but in his modesty he has told us less than a half truth. This city is not only an Americanized Germany, but, in a sense not true of any other city, it has Americanized all nations and peoples.* No other city has ever made the eagle scream above Socrates and Aristotle.

There is an East, and there is a West, and the East is a gateway for the desirable peoples of the earth; but never could we have welcomed the liberty-loving millions but for the wealth of your plains and ranches, of your valleys and mountains, through which we have fed, and clothed, and enriched those that have come through eastern gates.

The best evidence of the exceptional grandeur of the greatness of the West is the possibility of such a gathering of educators through the hospitality of such a city. The East has no jealousy of the West. Is the father ever jealous of the prosperity and praise of the son? No; a thousand times no. It stirs his pride, and he thinks what he cannot say, "My blood is in his veins;" and so tonight, as we look upon this assemblage that could not be gathered in the East, we think some things that we will not say about the blood of the East in the enterprise and power of the West.

In view of the great discussion of the National Council of Education I had not supposed it would be æsthetic to refer to your mercurial reception, though, in view of the fact that our great leader, the United States Commissioner of Education, told us that mathematics is the culmination of nature, and grammar of human nature, it may be in order to refer to the unusual cordiality of this city.* Heretofore reception committees have been content to entertain during the days specified in the invitation, but in this case we have been forcibly reminded that, though invited to be

* The hall was adorned more elaborately than any other has ever been for the use of the N. E. A. Its decorations were patriotic and scholastic. A series of United States shields extended the length of the hall on either side, a magnificent eagle was screaming above each, while over the shield and beneath the eagle was the name of some master, with Socrates leading on the left, and Aristotle on the right. As Mr. Winship concluded the sentence of praise, which seemed extravagant, the silence was oppressive until he added the following sentence.—ED.]

* The railroad tickets required one to reach Milwaukee on Monday the 5th, whereas the opening of the meeting was not until Tuesday evening the 6th, and would not permit him to go until the 10th, though the meeting would close on the 9th.—ED.]

here on the 6th to 9th, we would be expected to be here from the 5th to the 10th. This was unappreciated hospitality until we remembered that 6 and 9 equals 5 and 10.

Dr. Harris well says that mathematics is the culmination of the study of nature; but when I said to the hotel clerk that I understood that, though we were here from the 5th to the 10th, we should only pay from the 6th to the 9th, his language reminded me that grammar is the culmination of human nature.

The timeliness of your reception will give Milwaukee a new significance hereafter: Be'er before time; be'er on time; be'er all the time; be here after time.

J. L. HOLLOWAY, SUPERINTENDENT OF SCHOOLS, FORT SMITH, ARK.

Mr. President:

I deem it a flattering compliment to be called upon to respond to these generous words of welcome so eloquently spoken by the distinguished representatives of our hosts—especially so since it falls to my pleasant lot to speak in behalf of the teachers of the southern states. Our good friend, Dr. Winship, has spoken to you of the matchless energy and enterprise of the East. Superintendents Lane and Gove will tell you the progress of the North and the expansion of the West.

Mr. President, there lies to the south of us a fair country, stretching through fifteen degrees of latitude and thirty degrees of longitude, with a coast line of 2,500 miles—fifteen imperial states, whose aggregate area exceeds the combined domains of France, Germany, Italy, Austria, and the British Isles, containing more than one-third the population of the Union; the home of a people through whose veins courses the purest Anglo-Saxon blood of the nation; a people whose struggle to keep in the forefront of all that makes a country great forms a chapter in our national life that will yet charm and thrill the student of history. But for the present her story is unwritten, her progress in the face of disaster yet untold.

When the bombardment of Fort Sumter inflamed to its highest pitch the passions of war, and the bloody battle of Bull Run presaged a fratricidal conflict whose cost in life and treasure has no parallel in history, the climax of the greatest crisis in our national destiny was reached and heralded around the globe. When the loved leader of the "Lost Cause" sheathed his sword in the presence of the "Silent Man of Iron" at Appomattox, and the ragged veterans of the Gray heard the farewell notes of the drum-major's corps as it played "Home, Sweet Home," the world witnessed the closing scene of the greatest tragedy of ancient or modern times. Weary and footsore, in rags and in poverty, despoiled of homes,

with ranks decimated, the social and industrial fabric of two centuries swept away, this remnant of a war-stricken people began anew the struggle of life, backed by no capital save sturdy hands and hopeful hearts, sustained by the sweet devotion of a womanhood whose heroism the world will never know. From fields made red with comrades' blood they marched to God's broad acres of sun-kissed hills and smiling vales at home, to clasp their loved ones to their breasts again. From the tumult of war they turned to the arts of peace. "They beat their swords into pruning hooks, and their spears into plowshares." The hand of toil wrought in the bosom of her fertile fields, and the marvelous resources of her hills and valleys yielded their treasures to the touch of a resolute will. Out of the ashes of defeat a new life sprang. The bow of a larger promise now spans the southern sky. Upon her altars a brighter fire is burning. Around her hearthstones a new hope shines. Floating upon soft zephyrs from out her schools a new song is heard whose cadence whispers of "Home, God, and Native Land." Her children are at once her hope and her glory; for them she strives. Her schools are the safeguard of her stability and her progress; for them she builds. The steady march of her army of five million pupils is pregnant with prophecies of a triumph far more glorious than any dream that ever swept before the enraptured vision of Cæsar or Napoleon. Her 115,000 teachers are a noble part of the priesthood under whose guidance God is lifting this people into the sunlight of a larger, better life.

We come, therefore, to this "Cream City" of the great Northwest, whose shaded avenues and broad thoroughfares, whose splendid bay and "unsalted sea," whose homes of thrift, and institutions of learning, whose marvelous growth and commercial prestige, all bespeak peace, plenty, and prosperity; we come to you to learn the secret of your success, and carry it back to our beloved land of the cypress and magnolia. We come to this great gathering to catch the spirit and enthusiasm of our educational leaders, and carry them back for the inspiration of the boys and girls of our sunny southland.

Believe me, sirs, your words of cheer and welcome steal into our hearts like the soft music of peace wafted over still waters of a moonlit night; stirring to its depths the sentiments of a patriotism that prostrates itself before no sectional shrines; and I beg to assure you that the South sends her note of response full-freighted with the spirit of fraternal fellowship.

AARON GOVE, SUPERINTENDENT OF SCHOOLS, DENVER, COLO.

Although the National Educational Association commences its thirty-sixth annual session tonight, the first great meeting of the association was held at Madison, in Wisconsin, thirteen years ago. From that time

to the present our numbers have increased, and the power and influence of this great organization have been magnified. It is significant that Wisconsin again welcomes our annual session in Milwaukee, the metropolis of the state, at this, the greatest gathering in our history. We are prepared to be not surprised at our reception, however great the hospitality bestowed, for Milwaukee, with its beautiful homes and its German-American welcomes, is famed throughout the nation.

In the assignment of the pleasant duty of responding to the addresses of welcome one notices that President Skinner had in mind the whole country, with a division of representation from East, West, South, and North. You have heard the words from New England through our eloquent schoolmaster-editor. Arkansas has tendered warm words from the warm-hearted South. Presently the greatest city on earth, through its superintendent of schools, will permit you to hear from its constituency—yes, more than permit, will compel, for the ringing voice of ex-President Lane will reach every ear in the house. It is for me, in the name of the western division, the country lying west of, and not including, Kansas and Nebraska, to speak words of courtesy to our hosts.

For convenient comparison, and to give information concisely, the Commissioner of Education in his reports has placed the states in groups. Among these are the North Atlantic Division, including New England, New York, New Jersey, and Pennsylvania, by far the most populous and the most wealthy; the North Central, in which are included, among others, Wisconsin, Minnesota, Iowa, Missouri, Kansas, and Nebraska; all west of that, including Colorado and Wyoming, make the Western Division. What has been done and what is doing along educational lines in that division deserves notice. In the last report of the commissioner one reads that the amount expended last year for public education per pupil was, in the Western Division, \$28.91; North Atlantic, \$26.84; in all other divisions materially less.

Based upon the per capita of population the Western Division spent \$3.61; North Atlantic, \$3.33, and the other divisions less.

Comparing by states, Wisconsin spent \$21 per pupil for public education; Rhode Island, \$33.20; Massachusetts, \$33.98; Colorado, \$38.42.

Massachusetts raised \$18.85 for the education of each child between the ages of five and eighteen; Colorado for the same purpose spent \$22.98; Wisconsin, \$8.37, less than half as much as Massachusetts, and much less than Colorado.

The Western Division paid its teachers \$64.65 a month, \$3 more than the North Atlantic Division, and \$20 more than Wisconsin and Illinois.

Believe me, this review is not presented in a boastful spirit, but to

remind you that notwithstanding the serious financial reverses of the past few years, and the insistence of the majority of the people upon a continued appreciation of the value of the gold dollar, the western people demonstrate their devotion to common school interests in a substantial manner. They have accepted the decision of the people given last November, and are heartily devoting their energies to the development of their own region, and the advancement of free education, loyal to the national government, and with a spirit of patriotism intense to a degree not excelled in any state.

Throughout the sessions of the association the present week, and at the meetings of the several departments, we shall gather for deliberation and discussion from all parts of the nation. We trust to meet socially many of the citizens of Wisconsin and Milwaukee, when personal introductions shall lead to mutual respect and pleasure.

ALBERT G. LANE, SUPERINTENDENT OF SCHOOLS, CHICAGO, ILL.

The members of the National Educational Association appreciate the cordial welcome extended to them by Wisconsin and Milwaukee, so generously expressed by the governor and the mayor, representing all the people, and voiced by the state and city superintendents of schools in behalf of the teachers. We appreciate the efforts of your local committee to furnish comfortable entertainment for all, to provide suitable places for our meeting, and royally to entertain us as guests.

This hall has been beautifully and artistically decorated so as to impress us with the fact that we have an inheritance of the thought and labors of many great men who loved their fellow-men and wrought in their behalf. Here is Horace Mann, who devoted his brilliant intellect and great force of character to perfecting the public-school system, to awakening the people to the educational needs of their children, and to the organization of institutes and normal schools for the professional training of teachers. It is a fitting tribute to place his picture and his name most prominent among those who have been the great teachers of the ages. On either side of Horace Mann are Froebel and Pestalozzi, once humble, unappreciated representatives of great educational ideas which are now rapidly modifying our whole primary work. On these shields are inscribed names representing every phase of philosophical thought, progress in art, in music, in science, in literature, in education.

Wisconsin holds an honorable place among the states formed from the Northwest territory, which was dedicated to education. Her educational system is broad, embracing an efficient system of county schools, high schools, normal schools, and a university. Ample provision has been made for the education of every child. Her people, inspired

by the example of Germany, attempted to protect all children in their inalienable right to an education, and enacted a law to accomplish this, but through misunderstandings and political manipulation these laws were repealed or rendered ineffective, instead of being amended and enforced, in Wisconsin and Illinois. But the issue of enforcing the proper training of every child for American citizenship is still before the people, and must be met.

It has been declared by some who represent leadership in the higher religious and educational institutions that there is a failure to develop high moral principle in the youth of our land, and that the public school and its methods of instruction are responsible. What are the facts? Millions of children have daily left their homes, gone to the schools, promptly taken up their work at 9 o'clock, and governed themselves in their social relations. In most of the cities, and in many parts of the country, they have been governed in the schoolroom without force or compulsion, and have put into practice the fundamental principles of self-government, based upon the recognition of the rights and privileges of others.

I maintain that those who attend the public schools until they have completed the elementary course of instruction will become moral, intelligent, loyal citizens.

The National Educational Association represents 400,000 teachers of the United States, and the interests of 20,000,000 children. Practically every state and territory, and every large city in this country has its representatives in this auditorium. Any resolutions or platform of principles which may be adopted by this convention will be presented in the various educational journals, and in the public press, to nearly all the teachers of the country, and to the intelligent public, who will measure and test every proposition on the basis of its fitness and adaptation to harmonious mental growth, to the development of true character, and to the cultivation of those social interests which will make American patriots.

ADDRESSES.

PRESIDENTIAL ADDRESS.

THE BEST EDUCATION FOR THE MASSES.

BY CHARLES R. SKINNER, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION, NEW YORK.

A little more than two centuries ago Governor Berkeley said of the conditions then existing in Virginia: "I thank God there are no free schools or printing presses, and I hope we shall not have them these hundred years; for learning has brought disobedience and heresy and sects into the world, and printing has divulged them, and libels against the best government. God keep us from both."

We will not now consider Berkeley's foresight or his religion, his politics or his patriotism. Neither will we seek the source of the spirit which moved him to pray that what he termed the "best government" might be spared the calamities which would follow learning. We pause only to note the fact, which history teaches, that other colonies did not follow Virginia's lead, and that the state which he hoped to save from printing presses and public schools became ere long the "Mother of Presidents." The two centuries since his day have witnessed in the United States a marvelous development of intellectual life, a wondrous transformation in educational standards.

Today as a nation we spend two hundred millions of dollars (\$200,000,000) upon our free common schools. Today the printing presses, against which Berkeley uttered his phillipic, furnish every year on an average two weekly newspapers and a printed book for each family in our land, and a daily newspaper for every two families.

The powers which control the affairs of this republic believe with Aristotle that "a state can be no better than the citizens of which it is composed," and with Dionysius that "the foundation of every state is in the education of its youth." Napoleon believed that "public instruction should be the first object of government," and we all accept the modern gospel: "Seek ye first the education of the people, and all other blessings will be added unto ye." He who is now president of the United States gave expression to the truth when he said: "This nation, if it would continue to lead in the race of progress and liberty, must do it through the intelligence and conscience of its people."

The "fine old conservative policy," as it was called two centuries ago, of "keeping subjects ignorant in order to make them submissive" has happily given place to one which seeks to educate all the people in order to preserve liberty, to enforce law, to develop manhood and womanhood, and to perpetuate the blessings of good government. Free common schools are open today all over our broad land. Colleges and universities, high schools and academies, and schools for professional and technical training offer their privileges to all who seek them. Two glorious centuries of educational growth, unmatched in the history of the world! What wondrous changes! What stupendous strides!

To quote again: "An open schoolhouse, free to all, evidences the highest type of advanced civilization. It is the gateway to progress, prosperity, and honor, and the best security for the liberties and independence of the people." If enlightenment is the best security for the liberty and independence of the people, and this enlightenment can be obtained by the expenditure of money for education rather than in providing military safeguards, then this nation has reason for hope.

The United States, today the youngest of all, is the only great nation of the world which expends more for education than for war. France spends annually \$4 per capita for her army and 70 cents per capita for education; England, \$3.72 for army and 62 cents for education; Prussia, \$2.04 for her army and 50 cents for education; Italy, \$1.52 for her army and 36 cents for education; Austria, \$1.36 for her army and 62 cents for education; Russia, \$2.04 for her army and 3 cents for education; the United States, 39 cents for her army and \$1.35 for education. England 6 to 1 for war! Russia 68 to 1 for war! the United States 4 to 1 for education! The United States spends more per capita annually for education than England, France, and Russia combined.

Many centuries have witnessed the growth of Oxford and Cambridge, and the world-famous universities of France and Germany. They have had and still have the support of royalty and nobility, of gentry and yeomanry, and have all the prestige of age and wealth and numbers. But our higher institutions of learning have no cause to apologize for their youth, and with justifiable pride we point to the high place which they occupy. Learned, high-minded men with noble aims and broad intellectuality have guided their affairs, guarded their interests, and have sent from these institutions to places of highest dignity and honor, men like themselves. More will follow, and, as the years go by, our American colleges and universities are destined to take rank among the best in the world. More money was donated to these institutions last year than was expended by scores of our states combined upon all their schools a generation ago. For their support millions of money will be generously given, as in the past, by those who happily possess great wealth and who

are imbued with a deep interest in the welfare of their fellow-men. Fortunately the time has arrived when there is no longer necessity for an American student to go abroad to complete his education. Our own country can equip him. This fact strengthens our nation at home and commands respect abroad.

The anxiety of philanthropists and statesmen and scholars today is not for the work of our colleges and universities. They have no cause to fear for the welfare of the one per cent. of our pupils who receive the highest education, but they may well be solicitous concerning the education which the public schools are giving the great masses of our pupils who can never hope to enjoy college or university training. Their deepest anxiety is for the "ninety and nine" who are with us, rather than for the one who goes higher to enjoy greater advantages, and who is eminently capable of bringing himself to the fold.

Philosophers and statesmen have ever recognized the truth that universal education is the basis of true national prosperity and real greatness. "The fair fabric of Justice raised by Numa," says Plutarch, "passed rapidly away because it was not founded upon education." No truer reason can be given for the decay of everything good in a state. No nation will ever realize its full possibilities which does not build upon the education of the whole people, upon the enlightenment of the masses. Every consideration of public safety points to the wisdom of emancipating the people from the slavery of ignorance. Might alone has made the struggle for greatness and has failed. War with all its horrors has proved powerless to make nations great. Rome, great as she was, and leader of the world, fell, not because she lacked brave generals and great rulers, but because her plan of education did not reach to the foundation of her national life and character. She rated conquest and luxury above learning.

In a republic like ours, the plan of education must not be like that of Rome, but our system of education, to realize its highest aim, must reach the common people, the "plain people," as Lincoln loved to call them. It must be our first concern to consider the truest interests of the great masses. Their equipment for life must be received in our common schools. We must remember that 95 per cent. of our children can never receive more than an elementary education, and that it is the highest province of the state to determine the character and the quality of the education which will best prepare them for their life work as individuals and as citizens of the Republic.

Whether agreeable or not, we must recognize the fact that it is the children of the plain people, in city and country, who are crowding our schoolrooms today, and these will always be in the majority. The children of the masses and not of the classes will rule us. They will be

the voters and the lawmakers. They will elect our presidents and governors. Above all they will make our homes. The masses are represented in our schools by sixteen millions of school children—a population which in itself is greater than the entire population of the country when independence was established. They cry out for an education which will fit them for life—and their country as it calls upon the masses for loyalty and service must hear and heed this cry.

If we do not properly educate the masses, we will more and more be dominated by a government of the ignorant. If we would be ruled by intelligence, wisdom, reason, and justice, our first concern should be to educate. If we would live under good laws, we must have good men to make our laws. If we would have society pure, we must overcome the tendency toward vice, by the uplifting influence of education. What the men and women of the future will be depends upon the kind of education we give our children now. "As the children are, so will our sovereigns soon be," was the maxim of Horace Mann, which might well be written in letters of gold in every schoolroom. We never lose sight of the fact that in this republic it is possible for the humblest citizen to become a representative or senator in Congress, a governor of a state, an ambassador to a foreign court, or president of the Republic itself. But a higher consideration is the fact that the stability of our government rests upon the intelligence, sanctity, and integrity of the home life of the masses. It is a public duty to provide an education which will prepare the humblest citizen to discharge well the duties of any position which may fall to him.

The dangers which threaten us today spring not only from the classes being uneducated, but also from the character of the education which we are giving these classes. We sometimes consider that this danger comes alone from the importation of ignorant foreigners. But we may well ask ourselves if the danger does not come as well from the carelessly educated masses of our own people as a result of badly adapted courses of study, of superficial instruction, and of failure on the part of the teacher to comprehend the vital influence which these masses of plain people exert upon our social and national life.

What is the best education for the masses as we find them represented in our common schools? Surely it must be the broadest and best which our school systems are able to furnish—broad enough and strong enough to equip man and woman with power to get and to do the best things in life—to act well their part in society and in government. Education must begin with the youngest. It must be enjoyed by the poorest. It must be shared by the richest. It must be secured to the remotest settler in distant states and territories, and freely given to the humblest dweller in our great cities. It must reach and touch alike the stately avenue and the degraded slums. In brief, every child must be

given and required to use an opportunity to develop the gifts with which God has endowed him, that he may grow to perfect manhood, to genuine culture—a culture which in hovel or mansion stands for character.

The best education for the masses is an education which will teach boys and girls their capabilities, and which will give them power to grasp opportunities, to accomplish results, to realize worthy ambitions, to know themselves, to appreciate their limitations as well as their capacities; which will give them courage to endure adverse fortune should it come, and wisdom to enjoy prosperity;—an education which will help people to help themselves; which will diminish suffering and discontent, and increase happiness; which will encourage thrift and discourage shiftlessness; which will lead people to enjoy that which they possess without envy; which teaches the dignity of labor, the value of money, the proper relation of labor to capital, and how they can be made to work together for the highest good of the state; which teaches how to earn a living honestly and satisfactorily; the necessity for diligence and economy; how to live within their income; how to accept life as they find it; to know that poverty is neither a crime nor a disgrace if an honest life stands near it, and that riches alone cannot bring honor and happiness or make men great and good.

Such an education would seem to be that which develops the noblest manhood and womanhood, gives the best equipment for life's duties, its pleasures and its hardships; which teaches unselfishness founded on the common brotherhood of man; which gives attention to good morals and good manners; which leads children to be honest, temperate, and virtuous; which exalts pure thinking, and places the highest value of purity upon life and conduct.

Recognizing the fact that the great majority—the masses of our citizens—are educated in the common schools, this best education must always furnish a thorough preparation for intelligent citizenship and clearly outline the privileges and obligations which it brings; the rights and duties of citizens at party primaries, at the polls, and in the jury box; must teach that a properly educated man will not sell his own vote or buy his neighbor's. Such an education will give a closer knowledge of government, local and national, a respect for the majesty of law, obedience to authority, love of order, veneration for the flag of our country, and for the history which it represents.

Such an education will teach our children to abhor crime, to hate evil, and this education as it grows will lead them to denounce mob rule and anarchy, whether they show their heads in New York or Chicago; will condemn lynch law, whether in Ohio or in Mississippi.

The elements of this best education are two: First, the subjects which compose the course of study and their correlation; second, the fitness and

influence of the teacher in adjusting instruction to varying conditions.

Charles Dudley Warner once declared that "the great trouble with the system of education in the United States is in trying to make the educational pyramid stand on its apex, and that the problem of education for our people would not be solved until we made that pyramid stand on its base."

When less than 1 per cent. of all pupils in the country are in college or university, it seems futile indeed to fashion any educational system based on collegiate or university training. It would seem to be more in accord with our institutions and the spirit of our government and laws to provide first of all for the thorough training of every boy and girl in the United States, in the elementary branches pursued in the primary and grammar schools. In other words, to say that every one of the 16,000,000 of pupils must pursue these essential studies required for a common-school education, viz., reading, writing, spelling, arithmetic, geography, grammar, American history, civil government, drawing, and the underlying principles of hygienic physiology. If you ask, "Why insist upon this course?" the answer is found in the fact that thorough instruction in these subjects will meet the necessities of life, and give all the education that 95 per cent. of the masses of our children can ever hope to obtain.

If this course is to be enriched, let enrichment come through the equipment of the teacher. Let not higher branches be forced into the lower grades, to crowd, mystify, and produce superficiality. By a proper correlation of these studies time and opportunity will be found for thoroughness of instruction, which will give to the child consciousness of power and at the same time lay a broad foundation upon which he can build as high as may be possible. The minds of the children can be turned toward the enjoyment which a knowledge of nature brings, and there can be instilled into their own lives that humane sympathy, that kindness of heart, which will lead them to deal gently with every thing that has life, whether it be beast, bird, or flower, not from sentiment alone, but from knowledge. Through this knowledge all the children may in theory or in reality come to know the delights and romance of real country life, and the children whose lives will be spent upon farms can be led to know that agriculture is not a drudgery, but a noble science, and a possible source of great happiness. Through the teacher, in connection with these studies, the lessons of life may be brought home to the children through intelligent study and discussion of current events.

If we are to build an educational pyramid, let us insist that its base shall be of the most thorough, practical course of elementary study possible, which every child must take. When these elementary studies have been thoroughly mastered by all alike, rich and poor, high and low, then allow those who can to pass on to secondary studies, providing for these

pupils, as in the elementary grades, the best teachers and appliances possible, keeping always in view the requirements of accuracy and thoroughness. When secondary studies are completed in high schools and academies, colleges and universities will provide higher education if demanded, and schools of law, of medicine, of science, of theology, and of pedagogy will give the technical preparation which each profession demands.

Let us see to it that we build our pyramid from the common school upward. Let us provide education first of all for those who can never go beyond the common school. Let us make the instruction there so sound, so strong, so complete, that pupils whether they go afterward to academy or college, to the countinghouse or the engine house, to the farm or the shop, to the mill or the factory, will take with them a life-long love of study, and enthusiasm for learning for learning's sake.

The course of instruction already outlined, if diligently pursued, will give discipline, encourage application, and train the mind in right channels. It will prepare youth for future study, if the way shall be open to them. The firmer the foundation of our common schools, the more prosperous will be the schools above them, for the success of our secondary schools, our colleges, and universities must always depend upon the strength of our common schools. The ambition to be realized in the university must be inspired in the lower schools. A desire for knowledge, made strong and constant in our common schools, will tend to keep our secondary schools and colleges full. The state should give every encouragement to higher institutions of learning, but we should build upon the right foundation, and this aid should come only after the best education has been provided for the masses.

History teaches that the races which we call inferior increase more rapidly than those which are civilized. Pearson, in his "National Life and Character," says: "It is in the lower strata of society that we have to seek for the springs of national life. . . . And the whole tendency of modern reforms is to improve the condition of the masses." The best education for the masses then, from my point of view, is that which will give the greatest amount of mental and moral power; that which will best fit each one of our millions of people to perform his individual share of the world's work in the best manner possible; which will fit him for the greatest degree of usefulness, helpfulness, and happiness; which will give him the noblest character; which will enable him to meet with courage and fortitude whatever of good or ill may come; "to do justly, to love honor."

Such an education will exalt home, dignify the citizen, ennoble the community, and magnify the State. We, who have the responsibility of leadership in this great work, must, in the noble words of Canon Farrar, "do our duty, and pray that we may do our duty here, now, today; not

in dreamy sweetness, but in active energy; not in the green oasis of the future, but in the dusty desert of the present; not in the imaginations of Otherwhere, but in the realities of Now."

THE STUDY OF HISTORY IN OUR PUBLIC SCHOOLS.

BY NEWTON C. DOUGHERTY, SUPERINTENDENT OF SCHOOLS, PEORIA, ILL.

The greater attention given to history in the course of study for our elementary and secondary schools is to be highly commended. It is in line with the truth that the foundation of broad culture must begin with the beginnings of education. No better material for child culture can be found than is afforded by the rich treasure house of history. Every consideration that makes education to be something more than a mere drilling of certain faculties and the mastery of tasks having no other purpose than to require labor in their mastery—every consideration that makes us seek to lead out the child's mind into a closer touch with the world, would prove that history is one of the very best subjects for the child's early study.

In the gradual development of our educational system it is very encouraging to note that of late more importance is assigned to this study as a recognized branch of instruction in our elementary and secondary schools. I say of late, because it is within the memory of most of those here assembled that our schools at one time did not give history an important place in the course of study. Some schools failed entirely to appreciate the pre-eminent advantages to be derived by unfolding to the awakening interest of the boy and girl some of the entrancing story of human life. For history is the record of life. The study of history is the study of humanity, and we gain an adequate knowledge of the race to which we belong by seeing the past as well as the present. It is not enough to observe the present generation now on earth, but from some vantage point we must catch the view of the mighty, endless procession that is sweeping on through the ages. And not only so, though we walk in the ranks of today, we must learn to put ourselves in thought with the ranks that have passed on, so that we understand their conditions and experiences. This may be the employment of the mature man, who understands more of what he sees, but the youthful mind as well finds the view intensely interesting. And if you will notice an intelligent child, taught history by a natural and intelligent method, you will find him never treating history as unreal or a mere fairy tale, but entering heartily into the spirit of the events, taking sides with combatants, testing actions by his own standards

of right, rejoicing or sorrowing in the results, pleased that he is able to explain the causes or purpose of some event, and eager for more.

It is history that thus carries us back into the past, enables us to comprehend the present, and sheds the radiance of hope and anticipation into the future, teaching us that, as the men of yesterday fashioned the structure as it stands, we shall leave it modified by our deeds, and that mankind will be either richer or poorer for our having lived.

In its practical value history takes first rank with other studies. Other subjects seem to relate more directly to our present interests, as we face the requirements of everyday life; but if we are to be more than mere drudges, driven by the exactions of the daily routine, we must observe the current of events from a higher vantage ground, which history alone affords. One has a better grasp of the situation in which he finds himself; he is better prepared to take advantage of opportunity; he faces disaster with more philosophical calmness; he triumphs over hindrances, and pursues a truer course to the goal, by reason of the strength and knowledge gained by historic research.

We judge more accurately of men and measures when we know more of what has been done in the past, and one thus informed is a better workman, a better student of any subject, a better citizen, and better fitted morally for life's duties. Most people recognize the importance of history as a record of the race of man, important for the sake of the record; "but its connection with the present, the light which it sheds upon what we ourselves are doing every day of our lives, its checkered narratives of human hopes and disappointments, its manifold lessons of encouragement or warning, are less generally felt, less generally accepted, and often not even understood." Examine history, for it is "philosophy teaching by experience." (Carlyle.)

The unflagging interest sustained by the study of history proves the unity of human experience. And from this unity important conclusions follow. Divested of the various outward trappings belonging to different times, the life of man shows a marvelous likeness through the ages. Though customs and institutions change, the heart of man repeats the old story of aspiration and toil, joy and sorrow. To be able to look beneath the surface and discover this essential unity is of great assistance in studying anything pertaining to humanity.

It is to be admitted that the historic narrative is often inaccurate, never perfectly reliable. Historic characters are distorted by prejudice, by political bias, by religious bigotry, by the ignorance of contemporaries. Especially in the case of distinguished characters, fictions innumerable have gathered about their names through the years, so that the true man is seen through a haze of tradition and in a glamor of unreality. It is said of Oliver Cromwell that there is no other personage in history whose

acts have been the subject of such conflicting theories. "History is like the sibyl, and only reveals her secrets to time, leaf by leaf. Farsighted historians of deep research, such as Hume, Lingard, Bousset, and Voltaire, have all been mistaken in Cromwell. The fault was not theirs, but belonged to the epoch in which they wrote. Authentic documents had not then seen the light, and Cromwell's portrait had only been painted by his enemies." (Lamartine.)

But these inaccuracies, so often found, do not destroy the value of history, nor do they prevent us from arriving at the truth. Sometimes they serve as the incentive to profounder research. As in the case of the character of Cromwell, "the evident contradictions of the historians of his own and of other countries, who had invariably exhibited Cromwell as a fantastic tyrant or a melodramatic hypocrite, induced Mr. Carlyle to think with justice that beneath these discordant components there might be found another Cromwell, a being of nature and not of imagination." Searching out and examining all the correspondence of Cromwell, "Mr. Carlyle collected, classed, studied, commented on, and rearranged these voluminous letters of his hero, and, having resuscitated as from the tomb the spirit of the man and the age, he committed to Europe this hitherto unpublished correspondence, saying, 'Receive and read; behold the true Cromwell.'" (Lamartine.)

Over and again history has been its own commentary, and has given the material to correct false and hasty judgments; and as the years pass and all the contributions from all sources come in to complete the record, the truth shines forth clearly in its own light. Historic research enables the student to analyze the statements made and to verify them. This study cultivates intellectual powers of the highest order. It accustoms the student to an attitude of attentive inquiry, impartial and painstaking. It teaches him to be indifferent to no detail of history proper; it teaches him to avoid hasty conclusions. He discovers that there is a philosophy in history which interprets the whole story of human life.

The inaccuracies found in the historic narrative and the necessity of careful study and research tend to cultivate the imagination in a healthful and legitimate way. The imagination has its appropriate part to play in the interpretation of history. The scattered facts preserved in books and archives supply but a fragment of the story of a nation's life. From these data the student uses his philosophic skill, and then the imagination fills out the picture in true coloring, and the course of past events becomes more than a panorama; it is real life enacted again. Every historic record has in it this element of imagination, unless it be the barest lists of names and dates. As soon as the chronicler touches upon motives of men, nature and influence of laws, customs, institutions, the

character of people, he calls into play the imagination to give the full description.

The historic pages do not supply the full story. Perhaps it is no exaggeration of the complexity and infinite detail even of a single life to say that "if they should be written down everyone, I suppose that even the world itself could not contain the books that should be written." But although historic facts are often not susceptible of proof, and every witness tells his story in his own way, and although we must use reason and imagination to complete the picture, still this does not constitute a valid objection against the truth and value of this study. We all adopt the historic argument to justify our conduct and opinions. There is scarcely an important event of our lives wherein we do not refer to our own past experience or that of others for some example to guide, some precedent to justify us. How mighty is precedent! In law it is the immediate and final argument. The most momentous questions of life are decided every day by the same rule of evidence employed by the judicious historian. And it is right that this method should be followed, not only by the extreme conservative, who wishes all things to be just as they have been, but by everyone who would avoid the errors of the past and improve upon its methods. Historic study reveals the rationale of existing things, knowledge of which would save many rash ventures undertaken in mere lightness and frivolous inconsiderateness, while the same study enables the reformer to unearth the root of an evil institution and to direct a popular movement to successful issue.

This discriminating historic sense frees men from the power of the demagogue and supplies the principles of true reform. It is necessary only that we recognize the true sphere of the historian, and not expect him to be an infallible recorder of events.

An intelligent student avoids the extremes. If one man can find in Julius Cæsar only a tyrant, while another counts him a patriot and a martyr; if one calls Napoleon a selfish, unprincipled usurper, and another extols his genius in war and in government, it is not history that is at fault, but the historian. The landscape is none the less beautiful because you have no eye to discern the beauty. Fire and water are none the less useful because a conflagration may have consumed your comfortable home, or because a flood may have swept away the fruits of your years of toil and frugality. The ocean teems with riches to reward human toil; it also speaks to man's higher spiritual senses, presenting aspects of beauty in its ever-changing shades of color, and reaching the sublime and awe-inspiring in the storm, although one man is indifferent to everything but the catch of fish, while the poet dreams and communes with the mighty deep.

In pursuance of this attempt to discriminate between conflicting state-

ments of history and rightly to interpret the records, we must learn to take only the best that each historian gives. Familiarity with the historian shows us where he is at his best, and wherein we must take his utterances with caution. We trust him where he is strong and reliable, and we make charitable allowances for his departures from the truth. We use the writer as an authority only in those fields of research wherein he is a master. Matthew Arnold condemns as unphilosophical the citation of Luther as an authority on the Athanasian creed, declaring that we might as well cite him as a witness on the origin of species. Luther's specialty was not speculative dogma, but the revival of the sense of conscience and personal responsibility. And he should be used as an authority in his own field.

History opens to us the study of the development of mankind, rather of the connected series of developments through which the human race has passed in all its various branches. As the view sweeps beyond the obstacles that retard that development and discovers all the streams from many sources that contribute to that progress, we learn what are the underlying foundations and forces of civilization. This breadth of view begets confidence on the great world movement that sets toward better things. Such conceptions are needful in the study of universal history. The failure and ruin of former civilizations, the eclipse of learning during the dark ages, the reappearance of barbaric ideas in modern life, and everything that seems to contradict the law of progress, are not to be mistaken for the mighty current of Time's river, but are the eddies and whirlpools which seem to set backward, but which only betray the volume and momentum of the stream.

There are troublesome problems involved in the conditions of life today. We must face them, and those who are now entering upon maturity must treat them with prudence and wisdom; the emergency cannot be postponed. There is call for greater intelligence in the citizen and abler statesmanship in our public officials than were required before. America, while occupying the coin of advantage, must produce a population qualified to grasp and use the golden opportunity.

We seek to fit the children of today for citizenship tomorrow. To combat the political pessimism that is rife, and to save from gloomy brooding over the discouraging aspects of modern life, nothing is more helpful than an acquaintance with history. It corrects those half-way views of human affairs which men inevitably form by knowing only their immediate surroundings, without realizing the heritage from the past which they enjoy, and the steady amelioration of their lot through the operation of natural laws, economic and social. The preachers of calamity, political, industrial, or social, are usually ignorant of the great world movement upward. Their "hind sight" is as poor as their foresight. If

we would make good citizens, informed as to the nation's sources of strength, loyal and hopeful, let us teach them their duty to the future by showing them the rugged path their forefathers trod, that they may emulate every noble virtue. What may we not hope from this generation coming upon the field of action, if they are filled with gratitude to the fathers, with loyalty to the nation's highest ideals, and with a lofty sense of duty due to those who come after.

Hence I repeat what I said at first, that the prominent place assigned at last to history in our educational system is a most encouraging feature. We are justified in reposing more confidence in the capacity and good principles of the rising generation from knowing that they are schooled in the lessons and experience of the past, derived from the great storehouse of history. In our political campaigns, despite all the animosity and partisan heat engendered, we may believe that the nation's conscience and patriotism are aroused. As during the recent campaign men felt that the country's honor must be vindicated, and her institutions of law and order must be upheld, and they were united in spirit by bonds of a glorious ancestry of pilgrim memory and of revolutionary fame. Children taught in the public schools remembered that the nation was planted in the fear of God, that its independence was established through the baptism of blood, that its public policy had never been stained by repudiation, and, so apprehending their duty in the present, they reaffirmed the honor and integrity of the nation.

The method of teaching history now commands our thought. It is of prime importance that proper arrangement of the subject-matter and true methods of instruction be followed. It is quite possible that the excellent results we have spoken of should fail to be attained through injudicious and faulty methods. The possibilities of good in this field do not come without painstaking care and resourceful skill on the part of the teacher, calling forth the best efforts of the child. In fact, something of the same keen apprehension and discrimination that are needful in pursuing the study of history is also quite as needful in directing the study of another.

First, as to the subject-matter. It is overwhelming in volume and elaborateness of detail. It is of infinite complexity in nature and interrelation of parts. Chronicles, biography, literature, progress of philosophy and science, law, civil institutions and customs, together with the physical features of the inhabitable lands and their products in successive ages, with other matter, call for treatment. The teacher must not lose himself in the wealth of riches, nor fail to keep due proportion in the choice of material. Instruction should progress from facts known to those that lie just beyond the horizon of knowledge, from the simple to the complicated. History is so manifold, much of it being above the comprehension of a child, because beyond his experience, that it requires

a particular faculty in the teacher so to handle his theme as to be perfectly understood. Yet, as the chief theme of history is man, and as all pupils feel something of the meaning of individual life, and respond most readily to the story of one person's struggles, defeats, and victories, so it would follow that biographies should first engage the pupil's mind. The simpler mode of life will be more easily understood, and so characters like Abraham or Joseph or Moses are easier for younger children to study than are the lives of the great Frederick, or Napoleon, or even Washington. Moreover, biography creates the true impression in the pupil's mind as to what history is. Progress may be made by selecting the hero of each people for familiar study, and, gathering further facts from geography, a beginning is made in the general outline of universal history. The more systematic study of national history would naturally begin with our own land, and the interest and zeal of the pupil should be unabated. Make it a matter of pride and patriotism to know our nation's history. Lamentable ignorance exists, sometimes among intelligent people, of the heroic and classic periods of our country's history. Patriotism cannot exist with ignorance. The pupils who enter our secondary schools should come with some knowledge of the greatest men of all ages, not, of course, with matured and wide knowledge, but they should know who were the greatest men, in what was their power, how they won success, and in what respects they should be emulated. It is possible even in the elementary schools that children by the teacher's aid should hold communion with the warriors and statesmen, the scholars and poets and orators, and the men of inventive genius who have won from Nature some of her secrets.

Secondly, as to methods of teaching history. Let us bear in mind that history is not a mere record of facts, of events in the order of occurrence, registers of wars, kings, dates; but that it is a continual development of the conditions of mankind, a grand organic unfolding of human life, and that every tribe and people in every age and clime have contributed in some measure to help or to hinder the great world movement. Not that every event belongs to history and is worth recording and studying. Perhaps nothing and no man is wholly insignificant; but one event may serve as representing many, and one man may be the type of a community. There are thousands of men and a multitude of happenings with which history has little or nothing to do. To seize upon the truly significant features of any age requires talent of high order in the historian. There are the kernel and the shell; there is the permanent power, and there are influences which are gathered up in mightier movements and lose their individuality. To see what really deserves mention we must correctly estimate relations. We must climb to some eminence from which we may look down upon the whole area, and thus discover what is little and what is large. Then

every event falls into its proper place, there is coherence of parts, and we have an intelligent grasp of the situation studied.

Good instruction in history has a most stimulating influence on the intellectual powers of the pupil. Ideas, seed thoughts, are supplied, and the pupil is taught where to find more. The reason is quickened to see how important events had their origin in a multitude of minor causes, how the largest schemes and preparations came to naught; and quickly the interested child asks, how? why? The effects of abundance and want, of war and of long-continued peace, of unearned success and of disappointed hopes, supply unlimited incentives to study.

These and a thousand other circumstances call into healthful activity the mental powers of the pupil. He should be led to think for himself. In morals, as in science, one owns only so much as he has won by individual effort; no one can become either learned or virtuous by proxy. The pupil in the study of history, as in every other study, must do the work of thinking, comparing, associating events together. He is not to repeat the words of the text-book or those of his teacher, but is to utter his ideas in his own language. Let him learn to keep in mind the contemporary events of the nations, and, while studying these things, let the literature of the age be called to mind, that he may gradually learn to place a true estimate upon literature.

It will be necessary to require the memorizing of some things. Exactness and thoroughness here will be a great saving ever afterwards. Names and dates ought never to be confused. Many dates should be known as well as the multiplication table; but they should be known for definite reasons and for important associations, and not for themselves alone. It should not be overlooked that names and dates are the memory hooks on which to accumulate related matter. If we have no fixed facts, our mental storehouse will be a disordered cluster of tangled ideas. Yet it is no mark of scholarship for the pupil to recite fluently a long list of figures, towns, wars, castles, kings, treaties, or even if he is able to tell many things that occurred, without knowing why they came about or what followed.

There is just one available preventative of these errors, and of all mechanical and lifeless teaching, and that is the personality of the teacher. There must be the guiding mind in all the pupil's thinking. The living word of the teacher, his looks, his animation, and actual interest in what he says, his explanations given just when they are needed, make impressions on the pupil's mind more vivid and lasting than the best book can produce. How great is the pity that the drama of human life, the poetry, the comedy, the tragedy, the romance, the epic, the soul-stirring record of heroic achievement, should ever be conned over as a dry, disagreeable task, or should ever be taught in a lifeless, unsympathetic, perfunctory way! The teacher has the mastery of the situation; he

can use his opportunity or let it escape. And according to his success in guiding will be the verdict of his pupils upon the value of history and the profit they gain therefrom. Not methods, books, apparatus, nor that science they represent, can make students of children, but the personality of the teacher can do this. More impressive than his words, speak his personal bearing, manners, works, and the man or the woman behind them all. The young are given to imitating the example of others, and thereby justifying their own deeds. The teacher of history, therefore, should not only know much and be able to do much, but he should be much and possess much in himself, in order to influence his pupils most effectively. Let him be a true man of sterling worth, that the pupil, while imbibing from his instruction a laudable hero-worship of the men of past ages, may also look nearer home for one worthy of respect, even of admiration. For each of us, though of lowly station, may stand with the great and good of all time, upon the eternal principles of social, political, and religious truth and liberty, to hold fellowship forever with noble souls.

The teacher should encourage in the pupil the habit of seeking and detecting moral principles and their operation. For this is the key to the plan of the ages. The student misses not only the ethical lessons which he might draw from history, but he reads superficially, untruly, and he misses the fundamental principles controlling the movements and destinies of men, when he is blind to the revelation of moral truth contained in history. The canon of revealed books is not closed. There is a progressive revelation of God's truth written and writing every day in the march of events. It is as trustworthy and clear to the eye of faith and hope as is the anciently revealed word written by holy men of old who were taught by the spirit of God. Some people take pleasure in detecting what they believe to be the fulfillment of ancient prophecies in modern affairs. The results are somewhat vague and unsatisfactory. But there is nothing vague in the complete demonstration of moral truth, the vindication of eternal ethical laws, the certain consequences of right and wrong conduct, promulgated on every page of history. Without allowing the directing agency of a wise Providence, history has no unity of plan—an interminable confusion of activities; but giving due allowance for this divine element, we may discover enough of the divine plan to warrant the belief that all the past and the future, all men, primitive, prehistoric, barbarous, as well as the most highly civilized, are comprehended in one grand development.

It is, of course, not the business of pupils in our secondary schools to fathom the depths of this plan of all ages, but even such children can observe the doings of the Almighty in eventful epochs.

Nothing speaks more impressively to young or to old than the life

that is lived before them. And when history is properly taught, many strong characters stand forth in clear colors. Noble, attractive examples of sterling virtue, living realities, wield their proper power over us, and the hideousness of vice, repellent and ugly, warns away from evil. A child may observe that a national policy which seemed to be profitable, though morally wrong, finally caused destruction. Great apprehended evils proved in the end to be blessings in disguise. At times startling instances are found disclosing the hand of God executing the law of retribution. And every event is suggestive, prompting to reflection, with the result that the great principles are firmly fixed in the pupil's thought.

The study of history in our schools should leave the pupil with great zest for its further pursuit. He should be more of a thinker than before; he should have made distinct advance in culture, which is the glorious end and aim of our whole educational system.

DATA OF METHOD.

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Method is a subject of common consideration; it is everywhere under discussion. While this subject has the interest of novelty, it is not new. It has been coextensive with human thought.

The savage who studied how successfully to present his claims to his chief was a disciple of method.

When Socrates chose, rather than announce his conclusions, to lead his pupil along the line of an inevitable chain of logic to those conclusions, he demonstrated himself a devotee of method.

Method may be defined as the way of accomplishing an end, whether that end be the conveying of a truth to the mind of a pupil in the school-room, or convincing a jury in the "box," or influencing an audience in the forum.

While method remained common and untutored, excepting by experience, it was regarded as a matter of course and provoked no adverse criticism, but when schools of method began to be established, whether in law, medicine, or theology, controversy arose.

Perhaps no schools of method have met such formidable opposition as those of method in teaching. This latter fact was perhaps due to several causes, among which we may enumerate the following:

1. They were first established to improve the teaching in the common-school branches, and, being thus engaged in work below the grade of

the colleges and universities, were regarded with disrespect by these institutions.

2. Their early teachings were more of the nature of devices than of fundamental principles. Much attention was given to such matters as the forms in fractions, rather than the relations of fractions to units and the effects of processes on numbers, or things represented by numbers; phonic or alphabetic methods of learning words, rather than the ideas represented by words; silent and oral reading, rather than getting the ideas of the author; accent, inflection, and modulation, rather than thought and meaning; sand boards, relief maps, political and physical geography, rather than the real conditions of life; mnemonics, catchwords, and puzzles, rather than the natural conditions of mental development.

3. Perhaps the most serious obstacle to method was found in the psychology, so long prevalent, that regarded the mind as an entity that received ideas as themselves kinds of separate entities or images that came into the mind, rather than as directly or indirectly the resultants of nervous excitation. Words and symbols were regarded as though they conveyed ideas, rather than served as mere stimuli to produce mental action of one form or another conditioned on previous mental action.

While this psychology prevailed, whether consciously or unconsciously, it was but natural that there should occur to the mind little necessity for scientific plan in conveying ideas.

4. A further cause of failure to appreciate method was the simple manner of living, the limited social demands of the masses, and the traditional notion of what constituted an education.

A tremendous change has taken place in the attitude of thought toward this subject.

A new psychology that regards ideas as the resultants of nervous action or excitation, that practically regards mind as directly or indirectly the function of physiological matter; an accumulation of knowledge that makes selection and discrimination a necessity; a complex and complicated civilization that makes conservation and economy of energy essential—have created an activity in planning that has caused some to exclaim, "Method run mad!"

We have our public and private normal and training schools in large and rapidly increasing numbers, and no college or university foundation is considered complete without its chair of pedagogy. The platform and daily and periodical press vie with each other in discussing this subject, and the publishing houses are busy issuing libraries of bound volumes treating it in its various phases.

The careful student of the platform discussions and press productions of the day must be cognizant of the fact that device, patent, and idealism have not yet disappeared.

We hear much of a school of Herbartians, the disciples of which seem much more concerned with promulgating the doctrines of Herbart than with exposing conditions and the means to ends.

A large number of persons calling themselves kindergarteners seem much more concerned with the forms and teachings of Froebel than with the demands of the child at a given age in our civilization and under our American conditions.

There are those who would subordinate the teaching of language to the incidents of the uses of language in expressing ideas upon the various subjects of thought. Many there are who would make the teaching of number incidental to the counting and calculating necessary in the study of objects of nature.

Concentration, co-ordination, and correlation are words frequent in the vocabularies of many teachers, and some there are who would seem to discover in these words and the processes they represent patent modes of thinking that would substitute the natural laws of mental action.

Far be it from the object of this essay to detract from the value of the contributions of any one or all of these propositions or devices to the pedagogical thought or agitation of the period, but it must be conceded that they indicate a willingness to engage with phenomena rather than with substance, with incident rather than with fundamental principles.

There are two principles of pedagogy that are fundamental, namely, the development of the mind, and the mastery of the environment.

If we take these two principles as primary data of method we shall find at once that they are hand maidens and serve as guiding influences to direct all our subsequent procedure. They serve as beacon lights lifted above the fogs and shadows that infest many of the specific propositions that, considered independently, obscure our way. They are a kind of standard scale by which we can measure all our schemes of method.

Let us glance at the significance of these data in their order.

The development of the mind implies mind study. By mind study is not meant psychology in any abstract or indefinite sense.

Too often the student of psychology accepts as his standard some text-book on this subject and assiduously peruses and memorizes its contents, learning its definitions of acts and descriptions of processes till he declares himself ready for an examination and considers himself a psychologist. Nothing has been more common in the experience of the examiner of teachers than the question, "What book do you recommend on this subject?"

Hence we hear of the "Old School" and the "New School" psychologists; of the *a priori* and empirical psychologists, etc.

Suppose we for a moment transfer our inquiry to botany and ask the question concerning the violet, To which school do you belong?

According to your school, is it a fragrant or odorless flower? What are its characteristics? According to your school, can it be cultivated in your climate, and, if so, under what conditions?

Would it not be much more direct to ask, What do you know about this plant, and to think less of the sources of information about the thing than of the knowledge of the thing itself?

Returning again to psychology, we shall know little of the mind till we emancipate ourselves from books. No one more than the writer appreciates the value of books as tributaries to the knowledge of subjects; likewise no one less than the author of a good book expects his writings to substitute a knowledge of the subject itself.

The center of the study must be the child itself, his mental phenomena under given conditions.

Let us concentrate attention upon the kind of study of the child that will aid most in teaching. It is not especially biological or physiological. The investigations of the biologist and anatomist have been wonderfully interesting, and have had their value; but, after all, so far as mental development is concerned, they are of little help. They disclose the physiology of the brain and nervous system, distinguish between white and gray matter, between cellular structure and nerve fiber, etc., but they do not expose mental energy. They furnish the grounds for certain inferences, such as that, as a rule, the more brain matter the greater mental power; but they cannot prescribe for the increase of brain matter, or the quality of mental energy.

No amount of biographical or anatomical investigation will tell how to create interest in a dull mind or how to render docile a vicious disposition.

Sociological conditions, heredity, neighborhood traditions, prejudices, customs, immediate environment, childhood predispositions, health, and similar causes must be largely responsible for the susceptibility or insusceptibility of the learner.

The child must be studied for the influence upon it of schoolroom conditions. He is here a member of a compact community, in which he can find a congenial element for almost any disposition. Mischief, sympathy, charity, emulation, ambition, aspiration, imitation, indolence, avarice, deceit, veracity, every impulse of the human breast is here in its germ form, or in one or another stage of development.

What are the effects upon him here of the different processes? Concert or individual recitation, public or private reproof or encouragement? Is he of a sensitive nature, such that public reproof may harden him and destroy his delicate moral fiber rather than improve him, or is his nature such that only public reproof or encouragement will benefit him? How does he profit by the different plans in teaching? Can we reach him

best in the particular instance with demonstration, illustration, analysis, synthesis, questioning, or lecturing? What has he gotten from either of these processes?

What are the child's mental activities and what the order of their development? What is the development of the particular child? When an object is placed before him, can he see it clearly? How much does he see? How much can he describe? What is his hearing power, and what the degree of his power of attention? When a proposition is read to him, can he repeat it correctly, or does he retain but part of it?

What mental acts are simple and first in order? What are more and still more complex, and later and still later in their order?

It is not necessary to suggest all the questions that arise in the study of the child. It is sufficient to indicate that such a study of the child as this becomes a basis of every plan of work.

All work is adapted as a matter of course, not upon any preconceived notion, but according to the actual mental needs and conditions, just as the skillful physician prescribes a diet and a treatment and a dose, not according to the allopathic, or homeopathic, or any other theory, but according to the needs of his patient as he understands them.

Such a study of the child draws the interest away from all patent methods or systems as such, and centers it on the needs of the pupil. It is no longer the question: Is this practice according to the silent or oral method, the Swedish or German system, but, Is it best for the mental or physical condition of the learner?

This study of the child becomes the central thought that draws within its current and subordinates to it as means to ends all devices and secondary methods or plans.

Our second fundamental principle or datum of method, namely, the mastery of our environment, must be the basis for all selection of subject-matter. It means the subordination of our surroundings to the uses of man, to his highest and best living. This is understood to conflict with some of the theories recently so eloquently and popularly advocated. For instance, a theory of concentration that would select some one subject as of prime importance and subordinate every other subject to it.

What reason is there, consistent with the final destiny of the human soul, that would warrant preferring one subject to another? If we would select a philosophy that would be a satisfactory basis for our schemes, it must be that the Creator deemed the circumstances of this life suited to the ultimate purposes of life, whatever they may be.

The whole trend of our advancing civilization is to this conclusion. Who shall measure the contribution to culture caused by the discovery of steam and electric power, or the invention of the printing press, the spinning jenny, or the sewing machine? Think of the relief to the tene-

ment districts of our great cities caused by rapid transit. Let the mind dwell for a moment upon the various inventions of the centuries, and it will discover in them an emancipation of slavery, a disenthralment of the human intellect greater than that brought about by all the wars.

The significance of this fact lends the richest luster to all students who strive for greater mastery in any of the lines of occupation or human action.

He who discovers a new law of trade, a more nutritious food, or a new principle in mechanics, or a more fruitful mode of labor, is a nobleman worthy a brighter signet than was ever accorded to knight of old.

We must distinguish between knowledge in subjects that is general and knowledge in subjects that is special or advanced. There is a knowledge in subjects that is primary, such as the common-school knowledge in reading, penmanship, grammar, arithmetic, geography, history, botany, zoölogy, mineralogy, physics, etc.

This knowledge must be acquired by all who would be fitted for citizenship or for specialization. But be it observed that in acquiring this knowledge, if we would follow the laws of human thought, the attention must be fixed upon the particular subject assigned for the particular period. When we are teaching number we cannot be teaching plants, and when we are teaching plants we cannot be teaching number.

Each of the various subjects has its own logical and psychological laws, and the successful treatment of the subject must pay due respect to these laws.

There is a natural law of the mind, namely, that when it is reading in the study of geography it is gaining power in reading, but this power must not be the object of attention, else it will detract from the knowledge of geography; so when we are counting the leaves of a plant we are gaining power in number, but this power is purely incidental, and must not be the object of attention, else attention is drawn from the plant.

There is going on in the mind a natural concentration, but this concentration must not be mistaken for, or substituted by, an artificial concentration, else there will be a loss of power in the particular subject of attention.

All concentration must be in the nature of supplementing the knowledge under consideration, and must in no sense detract from it. If it is a poem that would strengthen the historical fact, the historical fact must be the center of thought, and not the rhetoric or figure of the poem.

During the period of general knowledge each subject taken up should be treated with regard both to its psychological and logical order. It must be so treated as both to stimulate the natural mental development of the mind and lead to its own higher forms.

In every subject the selection of matter should be according to the

demands of life under our conditions, in the broad sense. The old notion of taking extra work in a subject purely for mental discipline is exploded on the basis of economy of energy. There is sufficient mental discipline provided many times over before we shall have acquired the necessary knowledge in the several subjects demanding attention.

Finally, when the period of specialization is reached, if we would render any service to ourselves and our race, if we would contribute anything to the vast stores of knowledge already acquired, we must be able to concentrate all our powers on the special subject in hand, eliminate from it all waste of energy, and contribute to it an original investigation possible only with the best-directed application.

It is the conviction of the writer that the great pedagogical need of the day is not better methods of blending subjects, but better selection of matter and direction of energy in subjects.

The advanced teacher in history is showing superior judgment in her selection of topics and in her modes of investigation rather than in the blending of her subject with others. The mind itself by its own laws of association will attend to the latter phase.

This paper has not attempted to discuss specific methods, but the writer is convinced that if the mentioned fundamental data are duly regarded, our store of valuable knowledge will be increased, our energies developed and conserved, our lives enriched, and our civilization advanced in all the intensity of these terms.

THE CO-OPERATION OF WOMAN'S CLUBS IN THE PUBLIC SCHOOLS.

BY MRS. ELLEN M. HENROTIN, CHICAGO, PRESIDENT OF THE GENERAL
FEDERATION OF WOMAN'S CLUBS.

The latter part of the nineteenth century has been distinguished by two movements: one, popular education; the other, the woman movement. In many ways the two are interdependent, for with the entrance of woman into the educational field the cause of primary education has become paramount; and though Pestalozzi and Froebel originated the kindergarten system, both looked to woman to put in practice the theories which they evolved.

The teaching profession has always been a favorite one with woman; in fact, for many years it was the only occupation suited to a gentlewoman. The large percentage of university and college graduates who embrace this profession demonstrates that even the opening of other trades and professions has not diverted woman from entering this one. This is

a subject, however, so familiar to such an audience as this that it is unnecessary to enlarge upon it. It is sufficient to say that, while women enter the universities and colleges in ever increasing numbers, the cause of primary education is still receiving their earnest consideration, and, though with one hand they reach up for the cap and gown, they hold fast to the little child with the other, thus correlating education as has never before been done.

The woman's-club movement is distinctly educational. A close student of social economics said to me the other day that he regarded the woman's-club movement as one of the most logical developments of the new education that had yet been evolved, because it recognized the fact that education is not limited to the school period, but continues to the last day of a man's life; and that the great department clubs correlated the various movements in which they are engaged, and thus secured an all-round view.

The history of the woman's-club movement can be briefly stated: Forty or fifty years ago woman found herself suddenly on the threshold of a new and larger life. The introduction of machinery and great combinations of capital which commenced at that time took from her many of the trades and professions which underly the home, and brought her face to face with the fact that she must follow those trades and professions into the competitive labor market. It goes without saying that the limited and individual training which she had received had illy fitted her to avail herself of then existing conditions. Women who are obliged to support themselves learn their lesson in their daily lives, but the large number of women who live in their own homes, with some leisure, cast about for a method by which they can fit themselves, not only by acquiring a fuller knowledge, but also by working in association, to take their part in social life. This education in the woman's club, and the small literary clubs and study classes which have been organized all over the country, are the foundation on which has been built the great club movement. From the literary club was evolved the department club, with its large membership and constructive work. Perhaps the women's clubs owe their strength to the fact that they realized early in the history of the movement how vain is knowledge which is not put to use, how harmful is sentiment which is not transmuted into action.

The department clubs have been organized into the following sections; education, philanthropy, social economics, home, art and science, literature and philosophy. Many of the purely literary clubs have a department of education.

I could fill my entire half-hour with a detailed account of what has been accomplished in the educational field by one or two great department clubs whose large membership enables them to influence public opinion ;

but were I to do this, I should fail to give you an idea of the breadth and scope of the educational work of the women's clubs. I have, therefore, confined myself to the work of the general and state federations. It is now seven years since the general federation of women's clubs was organized. All clubs are eligible to membership which have no political or sectarian test for membership. The first four years of the federation was naturally devoted to perfecting the organization. The charter membership of the federation represented about fifty clubs, and at the biennial, in 1894, 365 clubs sent delegates, and five state federations, namely, Maine, Utah, Kansas, Iowa, and Massachusetts. The benefits resulting to the clubs from membership in the general federation had become so obvious that the five state federations had been organized to enable the small clubs of the state, which could not afford to join the general federation, to have the same advantages. The meetings of the state federations are held annually, while the meetings of the general federation are biennial; that of '92 was held in Chicago; '94, in Philadelphia; '96, in Louisville, and '98 will be held in Denver. To attend these, many of the delegates must travel long distances, and the expense of the journey is often great.

The meetings of the state federations render it comparatively easy for delegates from small clubs to attend, both as regards the distance and the expense.

The formation of state federations was also advisable, as the state is a political unit, thoroughly understood, and the people of many states have characteristics in common, and have the same local needs, so that any one system of study or method of work adopted by a state federation is acceptable to all the clubs of that state. The state federations, most of which are only one or two years old, have increased rapidly in membership. Iowa, one of the oldest state federations, has a membership of over 180 clubs. These state federations are all formed auxiliary to the general federation.

The work of the general federation from 1894-96 was assisting in the formation of state federations, and such was the success of the movement that the following states were organized: New Hampshire, Vermont, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Ohio, Illinois, Michigan, Minnesota, Wisconsin, Kentucky, Tennessee, Missouri, Arkansas, Georgia, Colorado, Washington, and the District of Columbia.

The work of the general federation from 1896-98 will be devoted to furthering a knowledge of and an interest in the educational conditions of the United States, both in the state and public-school systems.

At the biennial in Louisville in 1896 the following motion was unanimously adopted:

Resolved, That we recommend to the clubs a study of the science of education and of educational conditions existing in their cities, to the end that the united influence of

women's clubs may be exerted for the betterment of the state system of education from the kindergarten to the university.

Resolved, further, That we specially urge effort to emphasize systematic instruction in ethics in the public-school curriculum.

In furtherance of this action the following committee was appointed : Chairman, Mrs. Mary E. Mumford, of Pennsylvania ; Miss Margaret J. Evans, President of the Minnesota state federation and Principal of Carleton College, Northfield ; Mrs. Electra N. Walton, of Massachusetts ; Mrs. Alica Bradford Wiles, President of the Illinois federation. Mrs. Mumford has resigned from the committee on account of her long absence in Europe. Miss Evans has succeeded her as chairman, and Mrs. Robert Emory Park, Chairman of the Educational Committee of the Georgia federation, fills the vacancy caused by Mrs. Mumford's resignation.

That part of the movement which relates to the study of ethics in the public schools was introduced as the result of an able essay by Miss Evans, entitled "The Public Schools a Moral Factor in the Nation," which was read at the biennial. A circular letter was prepared by the committee, embodying the suggestion that the clubs should study the state public-school system of education, and when thoroughly acquainted with educational conditions should exert their influence to secure needed legislation, good school boards, good superintendents, skilled teachers, improved sanitary conditions of schoolhouses, and should endeavor, above all, to co-operate with the school authorities. The circular recommended that the state federation appoint a committee of three to take charge of the educational work of the state, to issue a circular letter of suggestions, and to arrange a programme for one session on education at each annual meeting ; and, further, that each club appoint a committee of three, and devote one session or more of the club year to the consideration of the public-school system of their locality. These suggestions have been very generally adopted by the state federations and by the clubs of the general federation, and, as facts speak louder than words, I will endeavor to give a concise résumé of the work undertaken in the cause of education by the state federations.

Every state federation has thus far carried out the suggestion that one session of each annual meeting should be devoted to a consideration of the educational status of the state.

To the state of Maine belongs the honor of having been the first federation to inaugurate the study of the educational work, and Mrs. Woodward, of Bangor, was the first chairman of an educational committee. The president, Mrs. Briggs, reports that since the formation of the Maine federation great interest in the schools has been aroused ; that in response to a circular asking every club to appoint a committee of women to visit the schools in their city or town and to report ; that these committees discov-

ered many school buildings to be in a terrible condition, and that they were changed for the better. The teachers were encouraged by the interest evinced. The president states that the federation will give special attention to the betterment of the rural schools during the official year.

The Massachusetts, New York, Michigan, and New Hampshire federations will devote the meetings in the autumn to the consideration of the educational status of their respective states. I specially recommend the programme of study which the committee has just issued.

Miss Gaines, President of the New Jersey federation, reports great interest in education, and that some clubs are maintaining lecture courses at nominal prices on the study of education, literature, and science.

Mrs. Wiles, President of the Illinois federation, reports great interest in Illinois. A circular letter was issued to the clubs in 1895. The Illinois women have now the school suffrage and also vote for the trustees of the state university. The last two years have shown a wonderful awakening in the interest felt in the schools and in the time devoted to visiting them.

Miss LeBaron, the chairman, credits this in large part to the club influence and to the school suffrage. Some clubs report receptions to teachers and receptions to parents and teachers.

Mrs. Stoutenborough, President of the Nebraska federation, writes that the resolutions of the general federation have been indorsed, and that special attention will be given to education; that the women's clubs all over the state are evincing great interest in the subject, and that the State Teachers' Association has invited the co-operation of the women's clubs to assist in the programme of the next annual meeting.

Mrs. Hansford, President of the Kentucky federation, reports growing interest in education, and that the Kentucky legislature has recently passed a law allowing women to vote for school trustees.

The Washington state federation, whose meeting occurred on June 23, held a symposium on education. The annual meeting occurred so late in the month that I am unable to give an account of any action taken.

Mrs. Allen, President of the Missouri federation, reports that a course of study has been sent out to all the clubs of the state; that Mrs. Boslog's paper on the "Child Problem in America," which excited such enthusiasm at the last annual meeting, has been printed and sent to all clubs throughout the state.

Mrs. Morris, President of the Wisconsin state federation, has appointed a committee consisting of one representative from each congressional district. Papers on state institutions have been sent to the clubs, and needed changes in the supervision and management of the state schools have been suggested. The clubs are requested to give a session to the consideration of these papers, that they may be in a position to secure intelligent and concerted action. The committee has presented a memo-

rial to Governor Schofield and the State Board of Control, asking for the introduction of a system of manual training in the state school for dependent children at Sparta, and a favorable reply has been received.

Mrs. Thayer, President of the Colorado federation, reports that the plan proposed by the general federation has been adopted, and committees have been very generally appointed by the clubs to report on the status of education in their localities and to evolve plans for practical work suited to the needs of the club.

The federated clubs of Denver have established free kindergartens, with baths in connection, and have succeeded in securing the passage of a law admitting the kindergarten into the public-school system. They have also adopted the system of circulating photographs and reproductions of the best pictures, and holding meetings for the mothers and kindergartens in the lower part of the city, providing a programme of music and showing pictures. Mothers' meetings in the public schools have also been organized, where the teachers and parents meet. The teachers, many of whom are club women, have organized a teachers' club. The State Superintendent of Public Instruction and the county superintendent are both women and members of the Denver Woman's Club, and several club women are members of the school board of Denver. Night schools have also been established, and kitchen gardens.

Mrs. Lowe, President of the Georgia federation, has succeeded in accomplishing almost a revolution throughout the state in the educational system by the interest awakened through the work of the committee, which keeps in touch with all developments in the educational line suited to the needs of that section. An outline of study was sent out by the committee to every club in Georgia. The teachers are co-operating by helping to form reading circles throughout the counties, and great success has resulted from this movement.

Miss Evans, of the Minnesota state federation, reports that the subject of the teaching of ethics in the public schools and industrial training are receiving careful attention from the clubs. The literary clubs are requested to co-operate in cultivating a taste for good literature, and carefully prepared lists of books, suitable for children and young people, are sent to the clubs, to be placed in turn in the hands of teachers and parents. Placards were also placed in the public schools throughout the state, containing simple directions of what to do to beautify the city. One club reports that the post mistress has requested copies of the placard for use in the post office, and also by the mayor for use in the city hall and council room.

Mrs. Jennings, President of the Utah federation, has appointed a committee on education, and great interest was aroused by the three able papers presented at the last annual meeting on the subject of education.

The state federation in several instances secured the introduction of free kindergartens. Maine has done good work in this respect. New Jersey has encouraged the movement to establish free kindergartens by the clubs of the state. These have been organized and maintained by clubs until, the boards of education took charge of them, and in some instances appropriations have been made for their support.

Mrs. Lockwood, President of the District of Columbia federation, reports that the special work of the year is to secure the co-operation of the national and local officers to introduce kindergartens into the public-school system. The bill is before Congress, and its passage is confidently anticipated by the federation.

The Arkansas federation is co-operating with the State Froebel Association to establish a state kindergarten normal school. During the coming winter several free kindergartens will be established in Little Rock.

The Georgia federation is establishing kindergartens. The Atlanta Woman's Club has supported a school of forty-one pupils the past year.

In most of the states the first practical work inaugurated by any club was to establish free kindergartens, and the kindergarten system has no more enthusiastic supporters than the women's clubs of the country.

The indirect result of the study of the school systems and of the wise action of the kindergarteners in holding mothers' meetings has been the formation of mothers' clubs. Twenty of these clubs are now making a study of school subjects in Minnesota.

Quite a large number of Michigan clubs are doing earnest work in the line of child study. The Illinois federation co-operated with the Illinois Society for Child Study, in holding the recent child-study congress in Chicago. The Chicago Woman's Club gave its auditorium to hold meetings, and the federation contributed over two hundred dollars towards the expenses. Many kindergartens are supported by the clubs all over the state. The clubs are also interested in the interior and exterior decoration of the schoolhouses. The Woman's Literary Union of Portland raised six hundred dollars for interior decoration of the schoolhouses, the co-operation of the school board was secured, the walls of the schoolrooms were decorated, and good prints and photographs were hung on the walls, and the effort made to bring the best that art has to offer to the schools. The art clubs belonging to the New Hampshire federation are placing pictures on the walls of schools.

Some wonderful work is being done in Illinois by clubs hitherto purely literary or artistic in decorating schoolrooms, donating pictures, busts, and bas-reliefs. The musical clubs are taking an interest in the musical work of the schools. In Wisconsin the decoration of the schoolhouses has commenced, and the task of procuring and mounting good repro-

ductions of the best pictures has been taken up by the club women, especially in Sparta and Berlin.

The Northfield clubs of Minnesota have made a collection of sixty good copies of classic art to represent the history of art. These pictures make a valuable addition to a school library.

The clubs have not been backward in securing legislation for the school system. The Maine federation represented twenty-four bills to the last legislature to secure better conditions in the public schools, and twenty-two were passed. Illinois has been interested in securing legislation. The Missouri federation prepared a bill to the legislature asking that the law be so amended that women be allowed to serve on school boards. This bill passed the house, but was lost in the senate. The next legislature will, however, surely pass the bill. The Georgia federation had a bill before the legislature, which has been favorably reported by the educational committee, to open all appointments of educational offices to women. This federation has also a petition before the trustees of the state university to admit women as students, and soon a bill to secure this will be presented to the legislature.

Twenty of the state federations have reported on their educational work. Vermont, Pennsylvania, Ohio, and Iowa are engaged on other lines of work, as town and village improvement associations, and public and traveling libraries. So much has been accomplished by the federations in establishing public and traveling libraries that it would be necessary to write a separate paper to give a detailed account of what has been done on this line.

The great problem of today is the correlation of life, and educators are devoting all their energies to the correlation of studies and of the different grades of instruction. It is now time to begin the process of the correlation of working powers and the conservation of energy which would result from such correlation. So much work is being duplicated because we are not willing to co-operate and learn each of the other. The interest in education which is evinced by women should be utilized by the National Educational Association, and by the powerful influence exerted by these two organizations there could be secured for the public school the very best that can be obtained, in school buildings, text-books, liberal salaries, teachers' pensions, skilled teachers, and necessary appropriations.

I venture to make a few suggestions in regard to the co-operation which can be extended by the women's clubs in aiding the teachers. First, in the rural schools—and this plan was suggested by the Commissioner of Education in his address in Boston before the home congress. The largest number of children receive their education in the rural schools, and it is very difficult to assist the children when they once leave

school, which, even under the most favorable circumstances, they usually do at the age of thirteen or fourteen. Almost every child at that age has developed a taste for some one thing, and a committee of the women's club of the locality could, by consultation with the teacher, direct the reading of the pupil in that line. It is impossible to ask the teacher to do this alone. All over the country, even in the rural districts, the schools are overcrowded, and the tendency continually to introduce new branches of study overworks the teachers, so that no extra burden should be placed on them. The members of a town or village club can, with comparative ease, acquaint themselves with the home needs of the children, and very little exertion would enable them to collect a school library. Under their direction the child could continue his education after leaving school, and through books an element of intellectual enjoyment would be introduced into the family, which would be the saving of many a young life. Traveling libraries could be utilized for the benefit of the schools if the teacher could secure some outside assistance, and this is a practical way for the members of the educational committee of the woman's club to evince their interest in the schools. The Superintendent of Public Instruction of Georgia and the county superintendents have co-operated with the club women and teachers in that state, organizing reading circles in the school districts.

At Hinsdale, in Illinois, is a unique experiment conducted by the woman's club of that place, in a night school. It is almost a memorial to the woman who organized it, as she died a few months after the school started. This lady had a young girl in her employ who was very intelligent, and who often seemed at a loss what to do with her evenings. In thinking it out the lady evolved the plan of the night school, and, in consultation with her friends, found there was a number of young girls just beyond the school age upon whose hands the evening hung heavy. There was a new public-school building in the town, and the board of education granted the use of a room with heat, light, and janitor service. The school began its session with about twenty pupils and two teachers, but within a week so numerous were the applications for admittance that Professor William C. Paine, principal of one of the schools in Chicago, was asked to take charge of it. In addition to the boys and girls who took some of the more advanced common-school studies, there was a large class of young men and women who wished to continue their education, and most surprising of all was an application from thirty people of foreign birth who desired to perfect themselves in the English language. There are now over a hundred pupils, and the school sessions are held three evenings a week and are two hours long. There is no charge for tuition, even the books and other necessities are furnished free. This plan is so simple that it is surprising that other towns and

villages have not thought of it, and its success is a proof of how greatly it is needed. The expense is small, as most of the teaching is gratuitous.

Another excellent plan would be for a state federation, or for any club which could afford it, to engage a good speaker on education, who could give practical suggestions, to speak before clubs and teachers' meetings and present plans of co-operation.

The general officers of the state federation and the educational committee should be invited to attend state and county teachers' meetings, and teachers will find them intelligent listeners and willing learners.

I welcome the fact that mothers' classes are being formed all over the country in connection with the work of the women's clubs. Mrs. Bourland, of Pontiac, Ill., has evolved what is, in my opinion, the best plan yet suggested—a conference of fathers, mothers, and teachers. This idea is in the line of the correlation of forces. The child was not born into the home to be educated by the mother alone, and any child educated without the co-operation in the school and home of both men and women has received but a one-sided and limited development. Above all, the child should not feel that education is an experiment.

All those clubs which are able to do so should invite the teachers to their receptions and field days, and the superintendents and principals of the city in which the state federation meets should also be invited to attend the educational session. This would not only be of advantage to the club members, but it would also raise the profession of teaching in the estimation of the public.

The vacation schools could be, in some of the smaller cities and in villages, inaugurated by the women's clubs. I have always regretted the adjournment of the clubs for so long a summer vacation, and think that committees might hold over to further the movement towards vacation schools and directed play for the children. The long summer vacations are more or less demoralizing for both parents, teachers, and children, and the formation of such schools on wise and helpful lines would be of inestimable benefit to the whole community.

The practical supervision of schoolhouses, and especially of the sanitary regulations, is a work which it is important for women's clubs to undertake. The superintendents and teachers are often unable to secure needed reforms in this direction from the school boards. It needs an outside influence. This is so in the rural districts, where the schools are rarely visited; these schools are often in so unsanitary a condition that it is hardly possible to send a child from a decent home to such a place. The women of the community by united effort can have the grounds surrounding a school put in order and the outhouses in decent condition. All the good instruction given in the school is vain unless decency characterizes the outward semblance.

A word as to the committees of visitation. Visiting the schools is oftener done in the spirit of investigation than of visitation, and women who intend to go to the schools in such a spirit had better stay at home. The best teacher shows to disadvantage under criticism, and anyone listening to a class in a critical attitude affects both teacher and pupil. I regret, myself, any tendency to report on the personnel of the school. It seems wiser to me to report on the school from a general point of view, rather than from the personal, and I am sure that teachers can assist this by their attitude toward visitors; and, by consultation with parents and committees, can themselves be helped, because no one person or no one profession has spoken the last word of wisdom, and it is for this reason that I so earnestly urge your co-operation with the educational committees of the federation. They need you, your practical experience, your unselfish devotion, your patience, your exact knowledge; and you need them, their influence on public opinion, their co-operation with you both in the schoolroom and in the home; above all, each needs the other in that spirit of reciprocity which is the foundation of the federation. And more than all else, the child needs this co-operation, that he may no longer have the divided sense, but may know that the parent and teacher, home and school are working together to insure a broad and harmonious development, which goes with the law and authority of life.

EDUCATION FROM A PUBLISHER'S STANDPOINT.

BY GILMAN H. TUCKER, AMERICAN BOOK COMPANY, NEW YORK CITY.

On behalf of the fraternity of schoolbook publishers, I desire, first of all, to recognize the honor you have done our craft by courteously according us a place on your programme. You have doubtless long regarded us as a legitimate "third estate" on the outside of the great councils of education. You now ask us to publicly justify our interest in all these special topics of thought which year by year draw together these great educational assemblages, and it is a welcome privilege to respond.

The publishers are, of course, regarded primarily as a commercial body; but their semi-public functions toward the teachers and the schools would be very poorly performed if limited by the narrow view of mere merchandising. Our business has another side, recognized by every intelligent publisher, so that in its true, broad, and ideal scope it is wholly at one with the spirit which animates the best work of the teacher and superintendent in carrying forward the great work of public education. We, therefore, feel that there should be the utmost sympathy at all

points between the makers and the users of schoolbooks, and that every-thing which can lead to a clearer and more complete understanding is an effectual contribution to a common cause.

GENERAL CONSIDERATIONS.

The relation of schoolbook publishing to the schools, or to the broader subject of education, offers many interesting points. The development of the business of text-book publishing, say in the past hundred years, in the nations which are foremost in education, if its full history could be presented, would mark in detail the steps of progress in education itself; but this would be most emphatically true of the United States, which almost merits the distinction of being the inventor of text-books. When we compare the numbers and kinds of text-books published in our own country for the use of schools, say fifty years ago, with those that are published today—a comparison of hundreds with thousands—we realize what an increasingly large part books hold in our educational scheme, and what an enlarged influence and responsibility have come to the publisher. This great multiplication of books may not be an unmixed good, but that it is, on the whole, an enormous educational help, no one will be rash enough to deny; and this state of things has come about in response to the demand which you, as leaders of educational thought, have created; so that at the bottom the responsibility and the credit are yours.

The question of the use and misuse of text-books is wide and deep, and has itself been the origin of many books and endless discussion. Some cynic, I believe, has even raised the point whether the invention of the art of printing has, on the whole, been a blessing to the human race; but nevertheless text-books have remained, and their use has increased.

The speller was at one time banished from what was regarded as the progressive school; the mental arithmetic had a like fate; technical grammar has suffered somewhat of an eclipse; but books on even these subjects are finding their way back into favor with the leaders. The just criticism made upon the books of the old time, and upon a certain class of books devoted to the older methods, was that they enslaved the schools and teachers by a dry routine, and furnished the letter which killeth, and not the spirit which maketh alive. But this is not true of the books chiefly in use in this country today. It may be stated as the truth, that books of this description are now used only by those who have not educated themselves up to the use of better standards and better methods; that the numbers are somewhat large, however, is not the fault of the publisher, who simply fulfills the office of supplying the demand. The fountain does not rise above its source. But with increased numbers of books have come great improvements in methods, and especially a great

improvement in the manner of using such books. Where formerly there were fifty or a hundred books forming a chain of routine which practically enslaved the schools, there are now thousands of books, but they are used by skillful teachers as the handy and efficient tools of their profession.

The question about text-books today is only one of form and method. And here there is nothing fixed or absolute; changes in methods of teaching, fashions, fads, whims, are always in evidence and moving on, not always marking steps of real progress, possibly oftener going round in circles; but they are an indication of life in education. Movement is life, and stagnation is death.

It does not follow that all old schoolbooks are bad, and that all new ones are good. What could be more foolish than not to hold on to so much of the world's experience as has been proved valuable up to the present time? Conservatism must be joined with radicalism if a wise balance is to be held. In the world's literature it is the old and standard, that which has really become crystalized, that comprises the chief value. Is it too much to say that there are old and standard text-books that can be very little improved upon, and that there are methods which have had the vogue of years that cannot summarily be set aside because something else is simply new? Books on literature, like school readers, must present virtually the same matter; it is only their form, and not their substance, that can be changed. The principles of mathematics remain the same; language, literature, history always present the same facts; political, social, and metaphysical subjects do not vary much. The natural sciences have the same basis, and only need to keep pace with new discoveries and modern discussion. And it must also be ever remembered that the text-books which make the most efficient tools in the hands of teachers of a high degree of ability and skill often prove very sorry instruments in the hands of another class of teachers not so intelligent or skillful.

There is also another practical fact known to publishers—that books regarded as of a very high degree of merit in one part of the country are not at all acceptable in another part. The character of communities, of widely separated states or sections—in other words, the environment—is found practically to be a governing element in the choice of kinds of text-books. This happens sometimes even in different parts of the same state, and is a matter not easily explainable. These idiosyncrasies perhaps grow out of the freedom of our republican life. Communities are accustomed to take care of themselves with the utmost freedom, in their own peculiar ways; as one might say, it is in accordance with the genius of our institutions.

Books of real merit have a certain personality, and, like persons, they attract or repel. The ideal education comes from a contact of person-

alities, of mind with mind; the live teaching force is always the *teacher* himself. The pre-eminent teacher can sometimes put the best part of himself into a book, and so the book becomes characteristic. There are really living books, attractive, popular, successful within their own circles, and yet indescribable, but containing certain elements of individuality or personality, such as distinguished the intelligent, clear-headed, magnetic teacher. They have a flavor that attracts and impresses, and which endows the subject with a living speech.

There is a shallow and dangerous popular belief, unhappily now rife in many states and communities, that a schoolbook is only so much paper, print, and binding, and that anybody can produce it at short order, at its mere mechanical cost, and that the results produced by its use in schools will be just as satisfactory as the use of any book whatever. This is an emphasis of the evil of text-book routine in its worst form. State uniformity, state publication, state contracts in the interest of mere cheapness are its outcome. I have referred to the makers of schoolbooks as authors, and not editors, because the real schoolbook is a creation; the best thought that can be put into printed pages, in the most skillful form that genius can contrive, under the great stress of competition to produce the most excellent, is none too good to help out and supplement the teaching abilities of the average teacher, and give life and reality to the subject taught. Such books can be produced only where there is the freedom of an open and ambitious competition, and where, without fear or favor, merit shall win, and where the rewards of success are worth this intense striving. And every publisher knows to his dear cost how much oftener he fails than succeeds, even under this condition.

The modern American text-book, the last product of text-book evolution, is in all ways a marvel of the art of book making. In the first place the publisher and the author are on a keen and persistent hunt to find each other; the publisher, to find the one appointed man or woman best qualified and equipped to write the best possible book on a given subject, or the best from a given standpoint—and there may be several worthy standpoints; and the author, or army of would-be authors, to find a publisher ready to print, and competent to push into circulation, the book which he believes will improve, even to the point of revolutionizing, the teaching of his favorite subject, and bring him fame and fortune. When this junction has been effected, then come into use all the facilities which a completely organized publishing house can command to bring out the best product. First, there is careful and skillful editorial supervision, which performs a great part in shaping and adapting material which most often comes to hand like a diamond in the rough; next there are not omitted such pictorial illustrations as explain and emphasize the text, and such diagrams, plans, and maps as tend to make clearer and more com-

plete the impression aimed at. The work of editor and artist is then supplemented by the finest art of the printer and the binder, and thus the attractive and substantial book finally appears. Just as the American public school differs from the public schools in Germany, in England, in France, in Canada, by its spontaneity, the freshness of its methods, and its strongly marked individuality in its local habitat, so the product of text-books in the United States differs from the product of text-books in other lands.

THE PUBLISHER'S RELATION TO EDUCATIONAL PROGRESS.

The part of the publisher is both to follow and to lead, to supply the want that exists and to create a new and better want. The first and obvious duty of the publisher is to supply the existing demand, and this in a way takes care of itself. The publisher's second and higher duty is constantly to watch the steps of educational progress and provide books which will, at the same time, create and fulfill a better and higher demand; and, stimulated by an ambition to lead and excel, this the progressive and live publisher is always doing. The editorial department of a well-organized publishing house keeps a close watch over educational tendencies, the development of this or that educational theory, the exemplification of this or that phase of teaching, the doings of this or that particular group of enthusiastic, growing teachers. It is easy to see what a close relation must exist between the editorial department and the teaching world to be able to form a correct judgment of the hundreds of manuscripts that are presented for inspection.

This is an age of great transition, and in no department of life's work is transition so evident as in methods of teaching. The present tendencies and transitions, wise and unwise, old and new, are sifted, put into form, and given to the educational world by such epoch-making reports as that of the Committee of Ten, the Committee of Fifteen, the Committee on Rural Schools. The editorial department must be in close touch with these reports, with the doctrines contained, with the philosophy preached, and must seek to materialize them in such a way as to make them usable in the schools.

Publishers study the educational sentiment and crystallize it into definite shape, providing text-books having a common basis, thus tending to assist in unifying the educational interests of the whole country.

Whatever interests educators interests publishers; the same problems confront both; both should be equally alert, active, and ready to take up improvements; if anything, the interest of the publisher is keener in these improvements than the interest of any individual. Unless the publisher plans wisely his whole capital is jeopardized. Unless he keeps in touch with the newest and best educational thought, embraces the good

and brings it to the front, and makes his house the headquarters for the best that is to be had, he loses prestige, he loses business, he loses profits, and must inevitably go to the wall in time. Hence, apart from any higher motives, the publisher is compelled by his pecuniary interests to keep to the forefront of educational progress.

The course of text-book publishing is an evolution, following closely the trend of educational discussion. Your deliberations here today determine the text-books of tomorrow. The publisher is a clearing house of educational ideas. A superintendent in a good place may do much by his individual effort. He preaches his doctrine, presents his views, guards with watchful care his own schools and his own teachers. The publisher gathers the personal views and personal influence of the best educators in all parts of the country and draws them together, crystallizes their thought in books, and by distributing those books throughout the country multiplies a thousandfold the influence of any individual educator.

The publisher is a conservator of educational interests. The personality of an active teacher or superintendent may tend to propagate bad methods; and wherever he goes and impresses his personality he may extend these bad methods. A publisher may publish a book containing bad methods, but under the law of the survival of the fittest the poor book perishes and the good book survives. Hence, the publisher's net resultant effort is always toward improvement, in this respect having the advantage over any individual educator.

THE PROPER USE OF TEXT-BOOKS.

In the best style of teaching of course the text-book is always subordinate. Books are bad masters, but good servants. They are not to be used as crutches to help those who could not otherwise walk, but are to be placed in the hands of the skillful as fine-edged tools. The wise teacher may omit, may add, may modify—in a word, may adapt the text to the wants of the hour, and thus extract and use to the greatest helpfulness. While the highest type of teacher may be a living text-book, time does not suffice, and the burden is too heavy for wholly personal work.

But with ordinary or inferior teaching—and who shall say, despite all improvements, how much of this sort of teaching still prevails throughout the breadth of this country?—the good, usable text-book is the chief dependence, the indispensable tool which almost wholly shapes the final teaching result.

And notwithstanding the days of talking, explaining, and lecturing, I am old-fashioned enough to believe that the real, downright study of the proper book by the pupil is a most useful adjunct in any course of mental training for the young.

PARTISANSHIP IN TEXT-BOOKS.

There is a class of text-books on such subjects as history, political economy, civics, and sociology in which facts and truths concerned are open to differing and partisan views. But the publisher cannot advocate the principles of a party; his true course is to give all honest and capable writers a fair hearing. He is not responsible for the views of the author; at the same time he should discourage and, within reasonable bounds, labor to prevent the propagation of injurious extremes.

In respect to United States school histories he is in a delicate and responsible position. That thirty years after the close of our Civil War there should, in some quarters, be a revival of intense sectional feeling, giving rise to little less than a clamor for the use of such school histories as shall most markedly favor the partisan views of either one side or the other, is nothing less than a distinct national calamity.

Charles Sumner, as intense a partisan as ever fought for complete liberty, was equally earnest for a full nationality, and advocated in the United States senate, with all the fervor of his great eloquence, that the trophies of the Civil War should not be cherished, but should be utterly destroyed. In this he was in agreement with the great and patriotic minds of all ages, from Greece and Rome down to England, Germany, and France. No more patriotic or worthy service can be performed by the publishers than to hold the balance even and to discourage the propagation of views and doctrines by extremists that tend toward disagreement and disruption, and instead to promote a broad and liberal spirit of fraternity and nationality; and to this worthy end the leaders of educational thought in this country should rally to their support and hold up their hands.

There is another threatening, narrowing influence that may well be mentioned in this connection—the tendency in some states towards limiting and localizing the production and use of schoolbooks within their own narrow borders. This is the ambition of the local politician; but the strong tendency of such a policy cannot be other than destructive to that best education which *lives* only in the sunlight of freedom. Writers of the best text-books, like the greatest teachers, are rare; they are not to be found in every village, city, or even state. And when found, no matter where—in Kansas, in Texas, in New York, Wisconsin, or Massachusetts—no part of the country should be deprived of the fruit of their labors, and no author of merit should be content with a less field of competition than the whole country. It is by such freedom, and a fair field for all comers, and by such a market, restricted by no sectional or state line, that the scale of merit is raised to the highest attainable point and the best results achieved.

THE COST OF SCHOOLBOOKS.

For some unaccountable reason there is a widespread misapprehension in respect to the cost of schoolbooks to the school patrons, and of the total amount expended for text-books in the different states and in the country as a whole. This false idea has taken such a strong hold on certain states and communities that under the hot breath of a certain class of politicians it has been fanned into a flame of passion, until the single aim has seemed to be to get *cheap* books, irrespective of all other considerations. The gravity of this evil necessitates its mention, and calls for the dissemination of correct information on this subject.

According to a series of investigations in different states, based upon statistics and reliable information, the conclusion has been reached that the consumption of schoolbooks in the public schools from year to year amounts, in cost to the purchaser, to a sum which would be equal to ten cents for each inhabitant, or about forty cents for each enrolled pupil. This includes highschool books and all.

According to the estimate of the present population of the United States, January 1, 1897, as given in the "World Almanac," upon a report from the governors of the states, our population is 74,036,761. This would make the schoolbook business of the United States (cost to the people) \$7,403,676.

The costs and profits of the business are closely calculated as follows :

Manufacturing cost, - - - - -	\$3,964,525
This embraces paper, printing, and binding, - - - - -	\$2,464,525
Annual cost composition, illustration, electrotypes, repairs on plates, revisions, editorial supervision, - - - - -	600,000
Copyrights paid to authors, - - - - -	600,000
Books distributed free for samples, - - - - -	300,000
Total, - - - - -	\$3,964,525
Agents' salaries and expenses, - - - - -	900,000
Interest on investment of \$10,000,000 in the business, - - - - -	600,000
Advertising and circulars, - - - - -	200,000
General expenses of distribution, including rents, taxes, insurance, salaries, freight, postage, general merchandising, and discounts, - - - - -	1,000,000
Deterioration of machinery, shop-worn stock, etc., - - - - -	150,000
Bad debts and losses, - - - - -	148,000
Total, - - - - -	\$6,962,525

Subtracting the total expenses of the business from the amount received for the books, we have \$441,151. This added to the \$600,000 interest makes \$1,041,151, the total return on an investment of \$10,000,000 equal to 10.41 per cent. This certainly is not exorbitant. If the cost of the machinery of distribution is criticised, such as the expenditure

for agents, it is replied that such expenses pertain to nearly every legitimate business, and that no substitute which has been tried has been found successful in business practice.

According to Commissioner Harris' latest report, the total expenditure in the United States for public education for the school year 1894-95 was \$178,215,556. This, of course, does not include money expended for schoolbooks, except in the few states which at that time furnished free books. It is thus seen what a very small proportion the cost of text-books bears to the sum of other educational expenditures. It is less than 3 per cent. of the total.

It is interesting to note from the last census report the amounts produced in some other classes of manufacture as compared with the amount estimated for schoolbooks. For instance, artificial flowers and feathers, \$9,000,000; paper bags, \$5,000,000; cigar boxes, \$7,000,000; while such luxuries as confectionery are noted at \$55,000,000; liquors—distilled, malt, and vinous—\$289,000,000; tobacco and cigars, \$195,000,000; and yet the only thing that seems obnoxious to criticism is the \$7,000,000 that is expended for schoolbooks.

The figures which I have presented in regard to schoolbook publishing cannot, I think, lack interest to you; nor the fact that, of the net results achieved, one house at least pays more than \$200,000 a year to its authors.

Something cannot be had for nothing, and it is for you, the makers of public opinion on educational matters, to say whether the relatively small outlay for the best text-books that wide and free competition can furnish is not about the best paying investment for its schools which the public can make. Is it not, therefore, your duty to direct the public mind back from the mere consideration of cheapness to the higher and more vital considerations of intrinsic merit and a suitable adaptability to desired educational ends?

COMPETITION.

I have assumed throughout this paper the existence of a most active competition in this country in text-book making and publishing. In an experience of thirty years of active connection with this business I have seen no period of ten years in which the competition to produce the best books—and no end of them in numbers—has been greater, or the enterprise to get them into use has been more active, than in the decade just now closing. You, among the elders, are qualified to judge of the correctness of this statement. This seems a proper place for me to say also that there has never been at any time, or in any quarter, any agreement or understanding among publishers which has in the least degree even tended to restrict any house or firm in putting such prices upon the books

of its production as the demands of free competition have dictated. I say this in the interest of truth, and to clear up an existing misapprehension; and every publisher will indorse this statement.

When you can invent a method of cornering the market of brains, you can then set up a monopoly of intellect, and when this is done, you can establish a monopoly in schoolbook publishing, but not until then. This topic leads directly to another cognate subject, which is based upon the recognition of the existence of the competition described.

THE EVILS OF THE COMMERCIAL SIDE OF PUBLISHING.

That such evils exist it would be folly to deny, but that they have been very greatly exaggerated and too widely advertised is equally true. Questionable practices in the adoption of text-books require the consent of two parties; the school side no less than the publishing side is involved, and it is equally for the interest of both that whatever evils do exist should be eliminated, or at least to the greatest possible extent minimized. Let us meet the question squarely and fairly.

I beg you to recognize that schoolbook publishing, as a business, has to fit itself to the environment of today, which surrounds the carrying on of all other kinds of trade. It is not, in this respect, a thing apart, and cannot possibly be made so. The laws governing it have not been made fiat or choice; they are the laws of its development by evolution, and have to be accepted as such.

In the beginning one man was the author, the manufacturer, the business manager, and the traveling agent to dispose of his books, just as in the primitive school the teacher was at once the teacher, principal, and superintendent. Following the laws of trade growth, the great publishing house, with its organized departments of editing, manufacturing, agency, and selling, has become established. In the market the school-book agent has become the most active factor between the schools and the publisher. These agents are selected almost exclusively from the ranks of the teachers; the traveling agent has a particular territory which he is expected to canvass. He has an intimate personal acquaintance with the teachers, superintendents, and members of school committees in his particular field. He should be acquainted with teaching in its different phases, should be a judge of good work, quick to see improvements, acquainted with the best devices in methods of teaching, the idiosyncrasies of communities, and, above all things, be ready and able to answer questions relative to the contents, teaching qualities, and advantages and disadvantages of the books upon his firm's list of publications. He should be a valuable assistant to the editorial department in calling attention to the particular transitions and changes going on within his district or territory. Like the circuit rider of the early days in our coun-

try's history, he carries from point to point the latest educational intelligence, the story of the last success or failure, and is usually a welcome visitor in every community. The story of the operations of the agent runs parallel with the story of the growth and development of the school system. More, even, than the educational journal he is the factor which has most to do with the unifying of work on progressive lines in the smaller communities.

But are schoolbooks always adopted upon their merits, and will not a poorer book sometimes succeed with efficient agency work where a better book fails of adoption without such support? Undoubtedly this is sometimes true. But in what other department of trade is it not true? And while human nature exists, and human influences prevail, such things will sometimes happen. But in the actively promoted schoolbooks of today no book is so poor that it does not answer a fair purpose, so that no lasting damage to the school can occur.

But occasionally are not wrong and pernicious influences made use of to accomplish the adoption? Possibly there may have been such instances. But when it is considered that the numbers of adoptions in any one year run into hundreds of thousands, the lapses, such as they are, make a very small percentage. In the heat of a fierce competition it is not always easy to draw the line where the merit of the book ends and friendship and favoritism begin. It must be remembered that the world is held together by human relationships, and in a country so full of politics as ours, where everything is touched by its influence, even sometimes the selection of teachers and preachers, is it strange that this should occasionally touch the adoption of text-books?

But the charge that any publishing house sets up a policy and bases its business upon it—a policy which is something other than the general excellence of its productions and the promotion of their use on other grounds than that of their intrinsic merit—is a statement too idle to deserve the notice of a denial. Among all publishers these evils are deprecated, and no means are spared to prevent them. Dishonest adoptions are the very rare exception to the rule, for there are literally hundreds of thousands of honest adoptions to one that is not so. These evils have been grossly exaggerated; sometimes by disappointed competing agents, sometimes by credulous moralists whose enthusiasm has clouded their judgment. This has been not only a detriment to the publishers, but a disparagement and disgrace to teachers and school officers, and it is time to call a halt in this campaign of double slanders. Every publisher will join heart and hand with you who represent the schools in the endeavor to make schoolbook selections the perfectly moral transactions they ought to be. Instead of withdrawing to a position of criticising and reviling, let all come forward and

actively help to add to the sum of existing good by eliminating all existing evil. That it is the publisher's interest to force upon his customer a poor book, when a good one costing no more in paper, print, binding, and copyright will insure him a lasting future market, is a charge that deserves to be scouted to the winds whence it proceeds.

CHANGES OF SCHOOLBOOKS.

There is a widespread popular notion that schoolbooks are changed oftener than the best interests of the schools require, and that the publishers are responsible. Most states have restrictive laws, prescribing periods of adoption of from three to six years, which are in the interest of a wise conservatism. But while these laws are a useful barrier against individual cases of excessive changes, it is still true that, on an average, books remain in use two or three times as long as any of the laws prescribe, and that the life of a good book lasts from ten to twenty years. Publishers are criticised for publishing too many new books, for revising their books too often, all merely to make changes in books necessary; they are equally criticised for continuing the publication of too many old books and forcing their continued use, and for not keeping them thoroughly revised, so blocking the way to improvements. Thus by the inconsiderate they are condemned if they do, and they are condemned if they don't; and it is a trying position to hold the scale even. As between most extreme views, the truth lies in a middle ground. Taking the country throughout, schoolbooks are not changed too often. This is not saying that there are not some unnecessary and ill-advised changes and often an artificial emphasis placed on the necessities of change. Nor is it saying that sometimes old books are not too long continued in use. But here is just the place where, on account of trade competition, the publishers cannot reasonably be expected to be the conservators. The responsibility of regulating these matters lies with teachers, superintendents, and school boards, in whose hands is lodged the power. They are, and must continue to be, the arbiters who are to decide all these questions of change, either acceding to or denying the agents' importunities, as they view the matter, in the clear light of public interest.

TEXT-BOOK ADOPTION AND SUPPLY.

With one almost continuous session of Congress, and the frequent and prolonged sessions of the legislatures of forty-five states, we are blessed or cursed with many laws, and with constant changes of laws. This threatens the simplicity of a republican form of government with becoming a labyrinthian complexity of laws which even judges cannot unravel and interpret. This plague of over-legislation has not omitted the schools, and especially the adoption and supply of text-books. The poli-

tician attacks this subject with a courage born of ignorance. Uniformity and cheapness are apparently the things chiefly considered, under the guise of state uniformity, by state adoption and state contract, or by state publication. All independence and individualism in text-books are killed by this Procrustean method. The needs and preferences of different communities are disregarded, the voice of teachers and local superintendents and school boards is stifled by a centralizing and paternal policy, and dangers of political jobbery are immensely augmented. If experience has taught anything, it is that those schools are best served with suitable text-books where the competition is the freest, and especially where a fair degree of local option prevails in the selection. This is a principle that ought to have the indorsement of every organized educational body in this land, as fundamentally in the interest of good schools. The adopting unit should be the township or the county, for when it gets to be greater than this, the teacher, whose right it is largely to determine this question, is put one side and his influence minimized. In this way, too, local needs can be recognized and supplied, and a proper individualism maintained, as against a system which aims to take the independence and life out of a system of schools by a plan compelling all concerned to think exactly alike.

The question of text-book supply is an all-important one—how to make it adequate, prompt, and reasonably cheap. "Free books" has been the most general recent answer, but this plan is not suited to all states. Moreover, it has only been carried so far as to lend books for the pupil's use for the time being. The full possession and ownership of the books by the pupils for use and reference at all times, in the school and at home, are the further necessary step to make the free-book plan complete. When the supply is not a public one there should be a plan for the books to reach the children's hands as directly as may be from the publishers, at the lowest competitive prices, without adding any intermediate profit, except the necessary and reasonable cost of distribution. Local option in the selection and direct supply at the lowest publishers' prices are two points which meet the requirement and cover the whole ground.

CONCLUSION.

Of the volume that might be written on the relation of the publisher to the schools I have only here and there touched a few of the most obvious points. But it is easily seen that the relation is a close one, and that the work of the publisher all along the line is absolutely identified with the work of the teacher, superintendent, and school board, and that co-operation and sympathy are the necessary watchwords; excellence and improvement in education profit both. We will give you our best service in an active, high-minded business enterprise, and you will help us by

approving our endeavors, and in preparing for us better and better books. This is the freedom and union which will best subserve the public interest.

EDUCATION OF THE DEAF.

BY ALEXANDER GRAHAM BELL, WASHINGTON, D. C.

[STENOGRAPHIC REPORT.]

Mr. President, Ladies and Gentlemen:

At this late hour I can do no more than take advantage of the invitation of the President to make a few remarks, giving you the points of the paper I had intended to present.

You all know that there is a great movement among teachers of the deaf seeking to bring their work more into affiliation with the work of the public schools. This found expression in a meeting in connection with the National Educational Association in Madison, Wis., in 1884. It also found expression last year in an express desire of teachers of the deaf, teachers of the blind, and others, to become more closely affiliated with this organization and to form a department for the consideration of the education of those requiring special methods in their instruction.

The education of the deaf should be of special interest to you, for the teacher of the deaf has far more difficulties to encounter in the work of instruction than the greatest difficulties that you can experience.

In looking back upon the history of the education of the deaf we find that the first attempt at instruction of a deaf-mute in America occurred more than two hundred years ago in the town of Raleigh, Mass., when the Rev. Mr. Philip Nelson attempted to teach a deaf and dumb boy to speak. The noise of this achievement went abroad, and it was stated that Mr. Nelson, in his presumption, had attempted to imitate the miracles of Christ by healing a dumb child. The community was very much aroused at this, and in 1679 a meeting of the neighboring ministers was held to consider this "miracle." They brought this poor deaf and dumb boy, Isaac Kilbourn, before them and examined him. They talked to the boy, and he did not answer them. He did not seem to hear anything they said, and so poor Mr. Philip Nelson was "sat down upon." His efforts to teach the boy brought only reproach upon him, and he had to retract all intention of being so presumptuous as to imitate the miracles of Christ. Now, it is a very strange thing that this same process led to the establishment of schools for the deaf in other countries. We read in Bede's "*Historia Ecclesiastica Gentis Anglorum*" how Bishop John cured a dumb man by blessing his tongue; how he made the

man put out his tongue to begin with, and then the sign of the holy cross was made on the tongue, and he signed to the man to say "a." He said "a," and "b," and so on through the whole alphabet. After that he gave syllables to the man, and he imitated those; then he gave him whole words; and after a while the man burst into speech, and talked away, and they couldn't stop him; and he kept telling his inmost thoughts all that night and the night following. Now, stripped of the miraculous, of course that was simply a case of articulation teaching, and the same thing happened in other countries. The ministers of the Roman church, quite different from our ministers in the New England states, instead of crushing out a supposed miracle, helped it all they could; and so we had schools arise in the Roman Catholic church. The results were looked upon as miraculous. One Pedro de Ponce, of Spain, was especially famous throughout all the world.

But these schools were too much for the generation in which they appeared. The results were supposed due to the miraculous powers of the priests, and these schools hardly survived their founders. It was not until the latter part of the last century that permanent schools appeared anywhere, that have lasted until our day. At the end of the last century there were only three schools for the deaf in the world—the school of Braidwood, in Edinburgh; the school of Heinicke, in Germany, and the school of the Abbé de l'Épée, in Paris. There was no school in America. The American deaf children had to be sent to Europe to be educated. We know of four deaf children who were sent to the school of Braidwood in Edinburgh. One was the child of Mr. Francis Green, of Boston; and three others were children of Mr. Bowling, of Virginia. They were there taught to speak with their mouths, audibly and well; and they came to understand the movements of the mouth by watching the mouth of the speaker. They received a good common-school education. Mr. Francis Green, the father of one of these children, in 1783 brought the work of Thomas Braidwood to the attention of the world in a work published in London under a very curious caption: "*Vox Oculis Subjecta*, a dissertation on the most curious and important art of imparting speech and the knowledge of language to the naturally deaf and consequently dumb." That was the first work upon the education of the deaf written by an American, although published in England. Ten years afterwards the first work published in America appeared in the transactions of the American Philosophic Society, by Mr. Thornton, being an essay on "The Art of Teaching Speech to the Deaf and Dumb." In 1803 Francis Green urged upon the people of America the establishment of schools for the deaf in this country, through the columns of the *New England Palladium*; but he died in 1809, without having attained his object.

Now, the other three children who were in the Braidwood school were children of Mr. Bowling, of Virginia. It so happened that a hearing brother of these children, Colonel William Bowling, when he grew up and married, had deaf children of his own, nephews of these first deaf-mutes; and he was anxious to have a school established in America. In 1812 John Braidwood, a grandson of Thomas Braidwood, appeared in America, went to Virginia, and took charge of the children of this Colonel William Bowling. He opened the first school for the deaf in the United States at Hampton, Va., in the year 1812, where the children were taught to speak and to understand speech on the Braidwood, or English, method. Unfortunately, this John Braidwood turned out to be a man of very dissipated habits, and, after remaining in charge of the school for a year or so, he departed for regions unknown. His friends helped to establish a school in Baltimore and another in New York, but this unfortunate man decamped with the funds, and left the scholars unattended. It was not until 1815 that steps were taken which resulted in the foundation of a permanent school for the deaf in this country, "The American School," at Hartford, Conn. Dr. Cogswell, of Hartford, Conn., had a deaf child, and was anxious to have it instructed in this country. He formed an association in Hartford, Conn., and they decided to get some young man to go to Europe and learn the Braidwood method from England and come back and open this school at Hartford, Conn. They selected a young theological student, the Rev. Thomas Hopkins Gallaudet, who was sent to England to learn the Braidwood method of instruction. Now, it proved very unfortunate for Mr. Gallaudet that this John Braidwood was in America. It is true he was a man of dissipated habits, but he knew all about the Braidwood method. When Gallaudet reached England, he was met with the inquiry, "Why wouldn't you have John Braidwood in your department?" He said he wouldn't have anything to do with Mr. Braidwood. Well, then, he could get no information except under conditions with which he found it impossible to comply. He thought he would try some other schools of Great Britain, but he found that the whole art of instructing the deaf in Great Britain was a monopoly in the hands of the Braidwood family, the teachers who had been educated by Braidwood being under bonds not to reveal the secrets of the methods to others; so he had to go to France, where the Abbé Sicard, the successor of the Abbé de l'Épée, received him with open arms; and the French method of instruction, instead of the English, was introduced into America. The Rev. Thomas Hopkins Gallaudet brought with him from the school of the Abbé Sicard a very highly educated deaf-mute, M. Laurent Clerc, who was thoroughly familiar with the French sign language; and together they opened the Hartford school. The French system spread from that school into all the schools on American soil. For fifty years there was no other method than the French

method in use in this country. All the state institutions adopted the sign method of instruction. It was not until 1867 that the German method, which originated in the school of Heinicke, appeared in this country, and what is now known as the oral method made its appearance. Now, in the sign method of instruction the French sign language was employed as a means of communication and instruction. I had intended to give you a specimen of the sign language, that you may understand that it is distinct from what is known as "manual spelling." It is a distinct language, like the French, or German, or Russian; quite distinct from our own. I will give you a little specimen of the Lord's prayer, as it was taught to me a good many years ago by a deaf-mute in Boston, which will show you a little of the nature of the language that was originally employed in all our schools in this country.

Now, you will observe that it is not manual spelling. Most teachers have the idea that spelling upon the fingers, as practiced in many of our schools, constitutes the sign language. To show the difference between the one and the other, I will give you a specimen of manual spelling as used in the manual-alphabet schools, like the school in Rochester, N. Y.

You will see that these are two distinct things. Now, the sign language which was introduced from France is a most interesting language from a scientific point of view. I do not know of any language that can give you more light upon the origin of all languages, or the way in which conventional languages arose from natural effects, for you can in many cases trace the relation between the sign language and the natural pantomime from which these signs originated. Of course, in order to be a true language the signs have to be conventional. In all languages the signs of thought are conventional; the signs of emotion are natural. Now, we have a close analogy to the sign language in the picture languages that have arisen in the world. We all can understand the significance of ordinary pictures, but these do not truly constitute a language. In order to constitute a language the pictures must be condensed, abbreviated, conventionalized. For example, the full picture of a lion may be brought down to the simple mane of a lion, and then that may change its meaning, and this figure, instead of meaning a lion, may mean strength. The beak of a dove may mean gentleness. And so, in the case of the deaf, the Abbé de l'Épée and his associates have constructed a conventional language. From the natural pantomime the signs have been abbreviated and conventionalized. Let me give you an illustration: The sign for female is made by scraping the thumb nail down the cheek. Why should that indicate female? Now, you cannot find out here, because the language came from France. If you want to find out why that meant female, you will have to go to Paris, and when you go down the Bois de Bologne

you will see the French *bonnes* with little white caps and long, white cap strings that reach almost to the ground. The little deaf children first went through this pantomime to give the idea of a woman. They pictured this little cap and strings going down the sides, and perhaps the petticoat. This was abbreviated until it meant a woman, and the height would indicate a woman or a little girl. The sign became still further conventionalized, until now it means a female. Our little deaf children pick up this sign, and simply understand the action to mean a female. I do not know of any more interesting language. The point I would impress upon you is that this sign language is a real language, differing from the English. Its affinities are more with the French than any other language. Now, in 1817 the Hartford school was opened, and this language was used as the basis of instruction. The problem then came to the teachers of the deaf, "How shall we teach a deaf child the English language?" The first plan adopted in this country was to teach them the French language, and then go to work through the means of the French sign language to teach English, as you would teach a foreign language; as you would teach Latin or Greek; with the same results—that the English language remained a foreign language, and the sign language became the language of thought.

But I promised not to inflict a long address upon you. I shall simply, therefore, point out a few of the changes that have taken place, until the work of the teaching the deaf is gradually approaching the work of teaching the hearing. In 1867 the oral method made its appearance in America, by which children were taught to speak, and to watch the movements of the mouth, without the sign language at all, and without the use of manual spelling at all. Two schools appeared in 1867, one the Clarke Institution, in Northampton, Mass., and another in New York. The next year another oral school appeared in Boston and another in Mystic; and then oral schools began to multiply, and this led to a very great change in the methods of instruction in the older schools. The sign-language method alone was employed up to that date. Then the sign schools began to teach speech to their pupils as well as the sign language. They attempted to combine the oral teaching with the sign teaching, and that process has gone on to such an extent that there is hardly a sign school left in this country. They have all practically become converted into the combined-system schools, in which the pupils may or may not be taught to speak.

Now another change of great significance took place. This movement of teaching speech necessitated the instruction of the deaf at an earlier age than had heretofore been customary. It used to be the case that children were admitted into our schools at fourteen years of age. The best age for a child to learn speech is very much younger. The age of

admission was reduced, and the necessity of having younger children under instruction led to the very large employment of women as teachers. So two of the immediate results of the introduction of the oral method were the reduction of the age of admission of pupils into our schools and the employment of women as teachers. These two lines of change have gone on to such an extent that possibly the majority of our teachers are now women. They are found to be much better adapted for instruction in the primary classes. The age of admission has been lowered and lowered and lowered, until now we find that infancy is the best age, and we have infant schools established for the deaf. It has been urged that in the teaching of speech, when the vocal organs are flexible, and when the children are young and at the natural age when speech is acquired by hearing children, then is the time to teach them. If you wait until the child gets to be twelve or fourteen years of age, the best years of its life are passed for language learning, and so the infant schools came to be established. We have here some of the pioneers of the movement of infant instruction of the deaf. We have the representative of the school of Miss Garrett, principal of the training school for children under school age, located at Philadelphia. We have the McCowen Oral School, of Chicago. The lowering of the age to such young pupils necessitated very great and radical changes in the methods of instruction. Methods that were perfectly well suited to children fourteen years of age were entirely unsuited to little babes; and so there has been introduced the kindergarten in the work of instructing the deaf. But the kindergarten is not quite suitable for the purpose intended. The spirit of the kindergarten is all right, but it has needed the invention of certain special forms to facilitate the work. These special forms have come into existence, and we now have forms of instruction embodying the kindergarten principles in use in several of our schools for the deaf, and notably in the McCowen Oral School, of Chicago. I would recommend all of you to see the methods pursued in that school, because they will be equally helpful to your pupils.

Now, another result of lowering the age of admission has been found in the inadvisability of sending deaf children away from home at a very young and tender age. You cannot take a little baby three or four years of age and send it off to a big institution. If it is to be instructed at all, it must remain at home among its own people and with its own friends; and so has commenced the notable extension of the day-school system for deaf children. Deaf children are scattered throughout the community, and you cannot get large day schools except in the great centers of population. Wisconsin stands at the head of a new movement for day schools. The state of Wisconsin gives state aid to local towns in Wisconsin, by which a teacher can be sent wherever four or five deaf

children can be gathered together near their homes. These little day schools have become a part of the public-school system of Wisconsin, and quite a number of them are in existence. Already a desire has been expressed in the neighboring states of Minnesota, Illinois, and Michigan for a similar law, providing for the establishment of day schools, in addition to the state's central institution.

One word, and I will conclude. The policy of the states in instructing the deaf in the past was dictated by necessity. It was, in a word, a policy of centralization; it was a policy of teaching the deaf children by taking them away from their homes and bringing them together into one special school. The first school, the American School of Hartford, was intended for the deaf children of the United States. When these were found to be too numerous, other schools arose, with the intention of bringing into them the children of one state. So this policy of centralization has, up to the adoption of this Wisconsin law, been the prevailing policy of the people. It has resulted, as perhaps might have been anticipated, in making of the deaf an isolated class in the community. They have taken the deaf away from association with their hearing fellows, their brothers and sisters and hearing friends. We have made them acquainted with one another, and when we turn them out into the world to earn their livelihood they know this language of signs, a foreign language, and they are foreigners in their own country. They naturally tend to get together in real life and avoid the society of strange, hearing people. So the deaf have become an isolated class, and the separation of our work from your work has led to the teachers of the deaf becoming an isolated band. We have held our own conventions; there have been very few points of contact between the teachers of the deaf and of the hearing. That is all to be changed. The plan introduced in Wisconsin favors a policy of decentralization. It is much better to scatter the deaf in a community during the process of education. Bring them together in as small numbers as possible; separate them as little as practicable from their hearing and speaking friends; let them live permanently in the communities in which they are to live in the future; do not sever the home ties and the ties with the hearing world; and it will be better for the children. That policy is the policy that is being tried in this state. Of course, all deaf children cannot go to day schools. All deaf children will not go to boarding schools and institutions; but the combination of the two, a state institution working in harmony with the scattered little day schools, is destined to produce great results; and the affiliation of these schools with the public schools of the state is of enormous importance.

The next step foreshadowed is a closer affiliation with your public-school system, and the formation of deaf schools in connection with the public schools. One of the features of these little schools in Wiscon-

sin has been that they have brought under instruction a large number of children who would never go to an institution for the deaf and dumb; who were only partially deaf, but could not profitably receive instruction in the ordinary public school. These children have come into these day schools.

Now, I might amplify later on, but in conclusion I would suggest as to whether there is not an important lesson to be gained from this idea in relation to the deaf. You have in all your schools children who require special instruction. You have got children whose eyesight is very defective, and yet you would not send them off to the blind institution, because they are not blind. You have children who are too deaf to profit by instruction in the public schools, but you would not send them off to the deaf and dumb institution. You have got children who are noticeably backward in their development and require special work; you would not send them off to the idiot asylum. Now, as to whether this plan of an annex to your public-school system might not with benefit be expanded and include more than the deaf, I would bring to the serious attention of this association. I have in mind a large gathering of the public schools, or the ordinary schools, and of a little annex off this for a class of children who require special instruction, with a special teacher in charge, where you could send children who were partially deaf, children of defective eyesight, and children who were backward in development, to be especially assisted; an annex to the public-school system. It has worked in the case of the deaf, and we commend it to your notice in the case of all children requiring special instruction.

One word more that I had almost forgot. I had hoped to have presented to you today the most marvelous result of education of the deaf that I have ever seen—Miss Helen Keller; but I cannot do it, and I think it will be interesting to you to know why. I went to Boston, hoping that I might prevail upon her and her teacher, Miss Sullivan, to come up here on a little rustication, and pop in among you; but the reason why Helen cannot come is that she has been very hard at work upon the Harvard examinations. This child, that has been deaf and blind from infancy, is attending Radcliffe College, with the hearing and seeing pupils. Of course, the labor of examination is very great, and those who love the child thought it would be better for her to go right on to the seaside, with the cooling breezes, to rusticate, than to come here and undergo the excitement of appearing before a large body.

But I have a letter from Dr. Gilman, from which I will read an extract, giving me the latest news of Helen's advancement. Dr. Gilman says: "Helen has taken the Harvard examinations in Latin, English, history, French, German, and advanced German. It seemed to me that she did well in all; and I have just been informed by the professor in

charge that she has passed in advanced German. This seemed to me the most severe of all. Of course, it was not a subject taken ordinarily by a candidate at her preliminary examinations. So that having passed in it is exceedingly creditable to Helen." Then he says: "I spelled all the papers to Helen myself, and no one else had access to her. Miss Sullivan was, by her special request, not present at any of the examinations." Miss Sullivan is her former teacher and now constant companion and interpreter. "I feared that Helen might be handicapped by my inexpertness, but she was very complimentary to me, and her success shows me that I have not entirely failed. Helen fairly reveled in the English examination, and evidently wished that it might have been much longer."

In communicating with Helen the manual alphabet is used, as a rule, by spelling into her hand, while she answers by word of mouth. She also has acquired the power of reading the lips of her friends, and it is very interesting to see a conversation carried on between one of the hearing ladies and Helen.

I thank you, ladies and gentlemen, for your attention.

FOREIGN-BORN CHILDREN IN THE PRIMARY GRADES.

BY MISS JANE ADDAMS, HULL HOUSE, CHICAGO.

The following paper is given with great diffidence. The writer has never been a teacher, nor even a close observer, in primary schools. She only had unusual opportunities for seeing the children of immigrants during and after the period of their short school life. She submits some of the observations and reflections which have come to her concerning the great mass of those children who never get beyond the primary grades, in the hope that they may prove suggestive to the educators present. The observations are confined to the children of the Italian colony lying directly east of Hull House, in the nineteenth ward of Chicago, although what is said concerning them might be applied, with certain modifications, to the children of Chicago's large Bohemian and Polish colonies.

For the purpose of this paper it will be best to treat of the school as a social institution, within which a certain concentration of social interests takes place, for the purpose of producing certain social results. This is certainly legitimate, if we take Dr. Dewey's statement that "the school selects, and presents in an organized manner, influences and instruments which may expedite and facilitate the socializing of the individual." Certainly, after the child leaves school his experiences consist of his partici-

pation in the social life in the various groups of which he is a member, or with which he comes in contact.

Whatever may be our ultimate conception of education, and however much we may differ in definition, as doubtless the members of this convention do widely differ, we shall probably agree that the ultimate aim is to modify the character and conduct of the individual, and to harmonize and adjust his activities; that even the primary school should aim to give the child's own experience a social value; and that this aim too often fails of success in the brief sojourn of the child of the foreign peasant in the public school.

The members of the nineteenth ward Italian colony are largely from south Italy, Calabrian and Sicilian peasants, or Neapolitans, from the workingmen's quarters of that city. They have come to America with a distinct aim of earning money, and finding more room for the energies of themselves and their children. In almost all cases they mean to go back again, simply because their imaginations cannot picture a continuous life away from the old surroundings. Their experiences in Italy have been that of simple, out-door activity, and the ideas they have have come directly to them from their struggle with nature, such a hand-to-hand struggle as takes place when each man gets his living largely through his own cultivation of the soil, with tools simply fashioned by his own hands. The women, as in all primitive life, have had more diversified activities than the men. They have cooked, spun, and knitted, in addition to their almost equal work in the fields. Very few of the peasant men or women can either read or write. They are devoted to their children, strong in their family feeling to remote relationships, and clan-nish in their community life.

The entire family has been upheaved, and is striving to adjust itself to its new surroundings. The men for the most part work on railroad extensions through the summer, under the direction of a padrone, who finds the work for them, regulates the amount of their wages, and supplies them with food. The first effect of immigration upon the women is that of idleness. They, of course, no longer work in the fields, nor milk the goats, nor pick up fagots. The mother of the family buys all the clothing not only already spun and woven, but made up into garments of a cut and fashion beyond her powers. It is, indeed, the most economical thing for her to do. Her house cleaning and cooking are of the simplest; the bread is usually baked outside of the house, and the macaroni bought prepared for boiling. All of those outdoor and domestic activities, which she would naturally have handed on to her daughters, have slipped away from her. The domestic arts are gone, with all their absorbing interests for the children, their educational value and incentive to activity. A household in a tenement receives almost no

raw material. For the hundreds of children who have never seen wheat grow there are dozens who have never seen bread baked. The occasional washings and scrubbing are associated only with discomfort. The child of these families receives constantly many stimuli of most exciting sort from his city street life, but he has little or no opportunity to use his energies in domestic manufacture, or, indeed, constructively, in any direction. No activity is supplied to take the place of that which, in Italy, he would naturally have found in his own home, and no new union is made for him with wholesome life.

Italian parents count upon the fact that their children learn the English language and American customs before they themselves do, and act not only as interpreters of the language about them, but as buffers between them and Chicago, and this results in a certain, almost pathetic dependence of the family upon the child. When a member of the family, therefore, first goes to school, the event is fraught with much significance to all the others. The family has no social life in any structural form, and can supply none to the child. If he receives it in the school, and gives it to his family, the school would thus become the connector with the organized society about them.

It is the children aged six, eight, and ten who go to school, entering, of course, the primary grades. If a boy is twelve or thirteen on his arrival in America, his parents see in him a wage-earning factor, and the girl of the same age is already looking toward her marriage.

Let us take one of these boys, who has learned in his six or eight years to speak his native language, and to feel himself strongly identified with the fortunes of his family.

Whatever interest has come to the minds of his ancestors has come through the use of their hands in the open air; and open air and activity of body have been the inevitable accompaniments of all their experiences. Yet the first thing that the boy must do when he reaches school is to sit still, at least part of the time, and he must learn to listen to what is said to him, with all the perplexity of listening to a foreign tongue. He does not find this very stimulating, and is slow to respond to the more subtle incentives of the schoolroom. The peasant child is perfectly indifferent to showing off and making a good recitation. He leaves all that to his schoolfellows who are more sophisticated and who are equipped with better English. It is not the purpose of this paper to describe the child's life in school, which the audience knows so much better than the writer, but she ventures to assert that if the little Italian lad were supplied, then and there, with tangible and resistance-offering material upon which to exercise his muscle, he would go bravely to work, and he would probably be ready later to use the symbols of letters and numbers to record and describe what he had done; and might even be incited to the exertion of

reading to find out what other people had done. Too often the teacher's conception of her duty is to transform him into an American of a somewhat snug and comfortable type, and she insists that the boy's powers must at once be developed in an abstract direction, quite ignoring the fact that his parents have had to do only with tangible things. She has little idea of the development of Italian life. Her outlook is national and not racial, and she fails, therefore, not only in knowledge of, but also in respect for, the child and his parents. She quite honestly estimates the child upon an American basis. The contempt for the experiences and languages of their parents which foreign children sometimes exhibit, and which is most damaging to their moral as well as intellectual life, is doubtless due in part to the overestimation which the school places upon speaking and reading in English. This cutting into his family loyalty takes away one of the most conspicuous and valuable traits of the Italian child.

His parents are not specially concerned in keeping him in school, and will not hold him there against his inclination, until his own interest shall do it for him. Their experience does not point to the good American tradition that it is the educated man who finally succeeds. The richest man on Ewing street can neither read nor write—even Italian. His cunning and acquisitiveness, combined with the credulity and ignorance of his countrymen, have slowly brought about his large fortune.

The child himself may feel the stirring of a vague ambition to go on until he is as the other children are; but he is not popular with his school-fellows, and he sadly feels the lack of dramatic interest. Even the pictures and objects presented to him, as well as the language, are strange.

If we admit that in education it is necessary to begin with the experiences which the child already has, through his spontaneous and social activity, then the city street begins this education for him in a more natural way than does the school.

The south Italian peasant comes from a life of picking olives and oranges, and he easily sends his children out to pick up coal from railroad tracks or wood from buildings which have been burned down. Unfortunately, this process leads by easy transition to petty thieving. It is easy to go from the coal on the railroad track to the coal and wood which stand before the dealer's shop; from the potatoes which have rolled from a rumbling wagon to the vegetables displayed by the grocer. This is apt to be the record of the boy who responds constantly to the stimuli and temptations of the street, although in the beginning his search for bits of food and fuel was prompted by the best of motives. The outlets offered to such a boy by the public school have failed to attract him, and as a truant he accepts this ignoble use of his inherited faculty. For the dynamic force which the boy has within himself, the spirit of adventure and restless activity, many unfortunate outlets are constantly offered.

The school, of course, has to compete with a great deal from the outside in addition to the distractions of the neighborhood. Nothing is more fascinating than that mysterious "down town," whither the boy longs to go to sell papers and black boots; to attend theaters, and, if possible, to stay all night, on the pretense of waiting for the early edition of the great dailies. If a boy is once thoroughly caught in these excitements, nothing can save him from overstimulation, and consequent debility and worthlessness, but a vigorous application of a compulsory-education law, with a truant school; which, indeed, should have forestalled the possibility of his ever thus being caught.

It is a disgrace to us that we allow so many Italian boys thus to waste their health in premature, exciting activity; and their mentality in mere cunning, which later leaves them dissolute and worthless men, with no habits of regular work and a distaste for its dullness.

These boys are not of criminal descent, nor vagrant heritage. On the contrary, their parents have been temperate, laborious, and painstaking, living for many generations on one piece of ground.

Had these boys been made to feel their place in the school community; had they been caught by its fascinations of marching and singing together as a distinct corps; had they felt the charm of manipulating actual material, they might have been spared this erratic development. Mark Crawford, for many years the able superintendent of the Chicago House of Corrections, has said that in looking over the records of that institution he found that of 21,000 boys under seventeen years of age who had been sent there under sentence less than eighty were school-boys.

The school is supposed to select the more enduring forms of life, and to eliminate, as far as possible, the trivialities and irrelevancies which actual living constantly presents.

But, in point of fact, the Italian child has received most of his interests upon the streets, where he has seen a great deal of these trivialities, magnified out of all proportion to their worth. He, of course, cares for them very much, and only education could give him a clew as to what to select and what to eliminate.

Leaving the child who does not stay in school, let us now consider the child who does faithfully remain until he reaches the age of factory work, which is, fortunately, in the most advanced of our factory states, fourteen years. Has anything been done up to this time, has even a beginning been made, to give him a consciousness of his social value? Has the outcome of the processes to which he has been subjected adapted him to deal more effectively and in a more vital manner with his present life?

Industrial history in itself is an interesting thing, and the story of

the long struggle of man in his attempts to bring natural forces under human control could be made most dramatic and graphic. The shops and factories all about him contain vivid and striking examples of the high development of the simple tools which his father still uses, and of the lessening expenditure of human energy. He is certainly cut off from nature, but he might be made to see nature as the background and material for the human activity which now surrounds him. Giotto portrayed the applied arts and industries in a series of such marvelous beauty and interest that every boy who passed the Shepherd's Tower longed to take his place in the industrial service of the citizens of Florence. We, on the contrary, have succeeded in keeping our factories, so far as the workers in them are concerned, totally detached from that life which means culture and growth.

No attempt is made to give a boy, who, we know, will certainly have to go into one of them, any insight into their historic significance, or to connect them in any intelligible way with the past and future. He has absolutely no consciousness of his social value, and his activities become inevitably perfectly mechanical. Most of the children who are thus put to work go on in their slavish life without seeing whither it tends, and with no reflections upon it. The brightest ones among them, however, gradually learn that they belong to a class which does the necessary work of life, and that there is another class which tends to absorb the product of that work.

May we not charge it to the public school that it has given to this child no knowledge of the social meaning of his work? Is it not possible that, if the proper estimate of education had been there; if all the children had been taught to use equally and to honor equally both their heads and hands; if they had been made even dimly to apprehend that for an individual to obtain the greatest control of himself for the performance of social service, and to realize within himself the value of the social service which he is performing, is to obtain the fullness of life—the hateful feeling of class distinction could never have grown up in any of them? It would then be of little moment to himself or to others whether the boy finally served the commonwealth in the factory or in the legislature.

But nothing in this larger view of life has reached our peasant's son. He finds himself in the drudgery of a factory, senselessly manipulating unrelated material, using his hands for unknown ends, and his head not at all. Owing to the fact that during his years in school he has used his head mostly, and his hands very little, nothing bewilders him so much as the suggestion that the school was intended as a preparation for his work in life. He would be equally amazed to find that his school was supposed to fill his mind with beautiful images and powers of thought, so

that he might be able to do this dull mechanical work, and still live a real life outside of it.

I know a boy who has finished the third grade, and who shovels coal all day, with no notion of where the coal comes from nor of the processes of combustion, nor of anything else connected with it. Yet it would have been far easier to have taught him all of those things than his laborious reading and writing, which he never uses, and is fast forgetting. His reading was supposed to have extended his intercourse far beyond the limits of his immediate environment in time and space; but he has never learned to read with enough facility to enjoy it, nor has he ever made enough connection between his reading and his outside world to induce him to go on with it under difficulties.

Foreign-born children have all the drudgery of learning to listen to, and read and write an alien tongue; and many never get beyond this first drudgery. I have interrogated dozens of these children who have left school from the third, fourth, and fifth grades, and I have met very few who ever read for pleasure. I have in mind an Italian boy whose arithmetic was connected with real life, while his reading was not. He is the son of a harnessmaker who, although he can neither read nor write, kept his little shop, and slowly made money. The great ambition of his life was that his son Angelo should be enough of a scholar to keep his books and to read him the daily papers; for he had a notion that the latter told you when and how to buy leather to the best advantage. Angelo was kept steadily at school until he was in the fifth grade. He used to come every evening to Hull House for help in his arithmetic, bringing with him slips of paper on which was written the amount of his father's sales during the day. His father himself could not add, but remembered accurately what he had charged for each thing he had disposed of. Before Angelo left school he read fairly well from the Fifth Reader. Five years have passed since then, and, although he keeps the accounts of the shop in which he had a vivid interest from the first, he has almost wholly forgotten how to read. He occasionally picks up a paper and attempts to read it to gratify his father, but he reads it badly and much dislikes the proceeding.

There is one fixed habit, however, which the boy carries away from school with him to the factory. Having the next grade continually before him as an object of attainment results in the feeling that his work is merely provisional, and that its sole use is to get him ready for other things. This tentative attitude takes the last bit of social stimulus out of his factory work, and he pursues it merely as a necessity. His last chance for a realization of social consciousness is gone.

From one point of view the school itself is an epitome of the competitive system, almost of the factory system. Certain standards are held

up and worked for ; and, even in the school, the child does little work with real joy and spontaneity. The pleasure which comes from creative effort, the thrill of production, is only occasional, and not the sustaining motive which keeps it going. The child in school often contracts the habit of expecting to do his work in certain hours, and to take his pleasure in certain other hours ; quite in the same spirit as he later earns his money by ten hours of dull factory work, and spends it in three hours of lurid and unprofitable pleasure in the evening. Both in the school and the factory his work has been dull and growing duller, and his pleasure must constantly grow more stimulating. Only occasionally, in either place, has he had a glimpse of the real joy of doing a thing for its own sake.

Those of us who are working to bring a fuller life to the industrial members of the community, who are looking forward to a time when work shall not be senseless drudgery, but shall contain some self-expression of the worker, sometimes feel the hopelessness of adding evening classes and social entertainments as a mere frill to a day filled with monotonous and deadening drudgery ; and we sometimes feel that we have a right to expect more help from the public schools than they now give us.

If the army of school children who enter the factories every year possessed thoroughly vitalized faculties, they might do much to lighten this incubus of dull factory work which presses so heavily upon so large a number of our fellow-citizens. Has our commercialism been so strong that our schools have become insensibly commercialized, rather than that our industrial life has felt the broadening and illuminating effect of the schools ?

The boy in the primary grades has really been used as material to be prepared for the grammar grades. Unconsciously his training, so far as it has been vocational at all, has been in the direction of clerical work. Is it possible that the business men, whom we have so long courted and worshiped in America, have really been dictating the curriculum of our public schools, in spite of the conventions of educators and the suggestions of university professors ? The business man has, of course, not said to himself : "I will have the public school train office boys and clerks for me, so that I may have them cheap ;" but he has thought, and sometimes said : "Teach the children to write legibly, and to figure accurately and quickly ; to acquire habits of punctuality and order ; to be prompt to obey, and not question why ; and you will fit them to make their way in the world as I have made mine."

Has the workingman been silent as to what he desires for his children, and allowed the business man to decide for him there as he has allowed

the politician to manage his municipal affairs? Or has the workingman suffered from our universal optimism, and really believed that his children would never need to go into industrial life at all, but that his sons would all become bankers and merchants?

Certain it is that no sufficient study has been made of the child who enters into industrial life early, and remains there permanently, to give him some set-off to its monotony and dullness; some historic significance of the part he is taking in the life of the commonwealth; some conception of the dignity of labor, which is sometimes mentioned to him, but never demonstrated. We have a curious notion, in spite of all our realism, that it is not possible for the mass of mankind to have interests and experiences of themselves which are worth anything. We transmit to the children of working people our own skepticism regarding the possibility of finding any joy or profit in their work. We practically incite them to get out of it as soon as possible.

I am quite sure that no one can possibly mistake this paper as a plea for trade schools, or as a desire to fit the boy for any given industry. Such a specializing would indeed be stupid when our industrial methods are developing and changing, almost day by day. But it does contend that life, as seen from the standpoint of the handworker, should not be emptied of all social consciousness and value, and that the school could make the boy infinitely more flexible and alive than he is now to the materials and forces of nature which, in spite of all man's activities, are unchangeable.

We do not wish to hold the school responsible for what should be charged up to the industrial system, but we may certainly ask that our schools shall not feed and perpetuate the baser features and motives of that system.

The isolation of the school from life—its failure to make life of more interest, and show it in its larger aspects—the mere equipping of the children with the tools of reading and writing, without giving them an absorbing interest concerning which they wish to read and write, certainly tends to defeat the very purpose of education.

The foreign-born child in the primary grades is given neither a greater use of his own powers in the social direction in which he will have to use them, nor yet an ability to share in the experiences of others.

I have ventured to speak thus frankly concerning the public school to a body of educators, because I realize that no one is so anxious as the teaching body itself to make the schools as effective and valuable as possible; and I may, perhaps, be able to realize even better than the teachers can how dependent a neighborhood of foreign-born colonists is upon the school as a socializing and harmonizing factor.

TOM AND HIS TEACHERS.

BY BISHOP JOHN H. VINCENT, CHAUTAUQUA.

[ABSTRACT.]

The address was an abridgment of Bishop Vincent's lecture on "Tom and His Teachers." He defined Tom as the American boy, and considered Tom's teachers chiefly outside of the schoolroom, insisting that tones of voice, incidental references at table and fireside, style of furniture, pattern of carpet, tint of ceiling, discussion of everyday news, street-corner talk, bulletin announcement of theater and circus, architecture of schoolhouse, dress of teachers, and the very atmosphere in which Tom sleeps—all are educating influences. Tom is at school twenty-four hours every day, and his teachers are legion. There are minor matters which the speaker wished to emphasize before presenting the radical and all-important teachings which Tom should receive. He pleaded for the careful consideration of other people, the burdens which through Tom's carelessness they are compelled to bear, the servants in the kitchen, his mother, her various domestic cares, etc. He insisted upon reverence for old age. The radical things which the address pleaded for are:

1. Tom should be taught to account himself a person and not a thing, a cause and not merely an effect. He should be not a floating log, but a tug-boat with the propelling power within. He should have moral courage to stand for what he knew to be right, and that in the presence of classmates and companions.

2. Tom, being a person, should be trained to independence, earning his own living, though his father be a millionaire, and this as much to create in Tom's mind a profound respect for people who are compelled to support themselves as to guarantee his own livelihood.

3. The address emphasized the law of interdependence. Tom should know and care for and minister to the well-being of the fellow next to him. He should consider himself a member of society, and should live for the general good. The address made plea also for the law of interdependence as applied to Tom's employers. The most effective teacher that Tom has between fourteen and twenty-one years of age is the man who pays him for service.

4. A very important rule in Tom's training is this: Never give Tom up. Teachers should not be discouraged with pupils because they are slow. Many men never mature until they are thirty or forty years of age. Some men surprise their old neighbors by some achievement at fifty. It is an inexcusable thing in the teacher to discourage a boy who is slow and dull. Tom should never be given up on the moral side. He is a person, and not a thing. God deals with us all as persons. He gives us liberty; he restrains us; he gives opportunity. Speaking with reverence, the bishop said: "It sometimes takes the Almighty Father eighty years to get a grip upon a human soul." Therefore, Tom's teachers at home and in society should never give Tom up.

THE NEED OF ENHANCED MATERIAL SUPPORT FOR THE RURAL SCHOOLS.

BY B. A. HINSDALE, UNIVERSITY OF MICHIGAN.

It is easy to understand how it was in ancient times that the phrase "money is the sinews of the state" was narrowed down into "money is

the sinews of war." War is at once a very prominent and a very costly form of state activity. Still, we may well question whether the saying did not, in being narrowed, lose more in comprehensiveness than it gained in point. At least, what Cicero said of war is just as true of many other services of the state; their sinews are an infinite amount of money. It is very true that patriotism, public spirit, and devotion to human well-being shine resplendent in history; it is also true that, in every healthy state there is, and there must be, a large amount of unrequited public service; still the great qualities just named have never proved themselves to be sufficient to sustain, for an extended period of time, any of the great services of the state. Nor can such a thing be expected. What is more, even if voluntary effort could sustain the state, the need of material support would be dispensed with only in part, because the burden would be merely shifted from the shoulders of society to the shoulders of some of its individual members.

That the sinews of public instruction on the present scale are a great, if not an infinite, amount of money is so obvious a fact as hardly to call for enforcement. Already the educational budgets of the most progressive countries have grown to great dimensions, and they are all the time increasing. The expenditure for common schools in the states of our union for the year 1894-95, not including payments on outstanding bonds, amounted to \$178,215,556, more than double the annual cost of carrying on the federal government before the Civil War; and there is every reason to expect that we shall cross the century line three years hence with an aggregate common-school expenditure of \$200,000,000. The states of New York and Pennsylvania expend more than \$20,000,000 a year each on their schools.

It is unfortunate that we cannot ascertain absolutely what part of the expenditure for public elementary education is made in urban schools and what part in the rural schools. The Bureau of Education, for the best of reasons, has not charged itself with the responsibility of finding out these facts. It would be difficult, or rather impossible, to draw a line between urban schools and rural schools that would not be arbitrary, because it is impossible to draw such a line between the urban and the rural population of the country. Still, existing statistics do throw some light on the problem.

The Census Bureau calls a concentration of population of more than 8,000 persons a city, and counts all such concentrations as urban population. The remaining population is, therefore, technically speaking, rural. In 1894-95 there were, according to the Commissioner of Education, 574 such cities in the country. Now, some of the educational statistics of these cities are extremely interesting when put in comparison with the corresponding statistics of the whole country, or, better, of the rural parts

of the country. Three comparisons will be made, the year being 1894-95.

The 574 cities counted school property valued at \$236,846,394, while the rural districts counted such property valued at only \$203,025,296. Approximately the ratio is 23 to 20.

The 574 cities expended for schools \$74,721,332; the rural districts \$103,494,224. The ratio, approximately, is 74 to 103.

The 574 cities enrolled in their schools 3,302,841 pupils to 10,889,491 pupils enrolled in the rural schools. The approximate ratio is 33 to 108.

This is a very striking showing. While the 574 cities own more than half the common-school property of the whole country, and expend something more than 41 per cent. of the total amount of common-school funds, they teach less than 24 per cent. of the total number of common-school pupils.

These statistics suggest some interesting reflections. One is that the test made is a very imperfect one, because a great many schools outside of the cities are urban schools to all intents and purposes. If we could draw the line with a reasonable approach to accuracy, the contrast would be still more striking. Another is that schools in cities are necessarily more expensive than schools in the country, so far as certain large items of expenditure are concerned; building sites, buildings, and certain kinds of services all cost much more. A third reflection is that, when all due allowance has been made for the greater cost just mentioned, the greater expenditure for urban schools in a general way is the measure of their superiority over rural schools. It may also be remarked that urban schools, in some respects, are much less expensive than rural schools, provided the two kinds of schools are made equally good. For example, 1,000 children could be given a good high-school education in a city high school much more cheaply than the same number of children could be given a similar education in village high schools. It is true, also, that children taught in the country have some advantages over children taught in the city, as their freer and closer intercourse with nature; but scholastically their position is much inferior to that of city children. The relatively small cost of rural schools means that the country children, as a whole, are taught in inferior schoolhouses by inferior teachers, and for much shorter periods of time. This last point, which is an important one, can be statistically fortified. In the 574 cities of 1894-95 the average of the school year was 190.1 days. The corresponding average for the rural schools is not given by the Bureau of Education, but the average for the whole country, taking city and rural districts together, was but 141.4 days. That is to say, the average city child has an opportunity to attend school nearly fifty days each year more than the average child of the whole country. It may be remarked, again, that if we could separate the

two classes of pupils with an approach to thoroughness, and could ascertain the average length of the city school year and of the country school year, the contrast would be far more marked.

If there was opportunity to examine the subject carefully, going into details, it would be easy to show that in large parts of the country, and even in whole states, the material support of the rural schools is most inadequate, no matter whether we compare it with the material support enjoyed by the city schools or with a reasonable provision for the purpose. Thousands of country schools are eking out a miserable existence, subsisting in a starving condition on a pitiful income. But such examination is not at all necessary to show that the rural schools, as a whole, need an enhanced material support. The subject is a painful one. Not much imagination is necessary to enable one to see the millions of children who attend the rural schools pleading for a redress of grievances with respect to the education that they receive as a preparation for life. No onslaught on the rural schools is intended; the fact that a great number of these schools are either good or excellent is in nowise denied or forgotten, but is distinctly admitted; still the stubborn fact remains that, on the whole, the material support of these schools is inadequate and stands in urgent need of enhancement. How shall this enhanced support be provided?

Before answering this question, two or three others must be considered. Could better use than at present be made of the material resources that the rural schools now enjoy? Could the present support of these schools be made to go farther, as measured in education, than it goes now? And if these questions are answered in the affirmative, this additional one arises: What changes in organization and administration are necessary in order that this reform may be made? These last questions may be all considered together. Moreover, the brief consideration that they will receive may be confined to a single important feature.

There are now scattered over the country tens of thousands of schools that are carried on under the greatest disadvantages. These schools are very small, and they are poorly provided for in respect to material equipment and financial support. For example, last year there were over 1,000 school districts in Michigan that enumerated less than 25 youth each of legal school age, while 70 counties contained 468 districts that enumerated less than 15 such persons each. The number of pupils enrolled in the schools is not given in the public statistics. There lies before me, however, a showing made by the county commissioner of one of the old and wealthy counties of the state, namely, Hillsdale county. There were 166 school districts and 165 schools. Six schools had 10 pupils or less in attendance; 17 had more than 10 and not more than 15; 22 had more than 15 and not more than 20. The smallest school in the county counted 5 pupils; 2 schools had 7 each; 1 had 8 pupils; 2 had 10 each.

The 6 schools that contained 10 pupils or less each had, in the aggregate, 47 pupils, and the cost of these schools for the year was \$833.85.

In 1893 Vermont had 153 schools of 6 pupils or less each. In 1892 there were between 1,000 and 1,200 schools in Maine that enrolled 12 pupils or less. Massachusetts, in 1893-94, reported 16 towns with an aggregate of nearly 100 schools, having an average of 11 pupils. The report of State Superintendent Skinner of New York for 1896 states that, in 1870, there were 1,500 school districts with an average attendance of less than 10 pupils, while in 1896 there were more than 3,500 such districts. Mr. Skinner makes the surprising statement "that the average daily attendance for all strictly country schools in the state does not exceed ten pupils for each school." "In hundreds of districts," he continues, "the number of school district officers exceeds the number of pupils." This is going beyond Ohio, where, until a few years ago, the school officers of all kinds were about three times as numerous as the teachers employed in the schools.

So it would appear that the district school in the Empire state is coming to be what the biologists call a rudimentary organ, which Mr. Darwin, in accordance with the doctrine of natural election, holds to be the survival of an organ that was once serviceable. The organ has perished, as he contends, through disuse. He finds examples of such organs in the stump of a tail in tailless breeds of animals, in the vestige of an ear in earless breeds of sheep, and in the minute dangling horns that sometimes appear in hornless breeds of cattle.

Now, it is needless to argue to men who are familiar with the subject that, as a whole, the best schools are impossible under such conditions as these. The material equipment is likely to be poor; the money to pay for appliances and teachers is almost certain to be insufficient; the material for suitable grading is wanting; while the danger is very great that, owing to the absence of the spur that comes from numbers, the functionary will take the chair of the teacher, and the pupils will be uninterested and spiritless. It is not surprising, therefore, that Mr. Skinner should have heard of a teacher of a two-pupil school who asked to be relieved from her contract; the only cause for surprise can be that he had not heard of more such teachers.

It is well known that the number of persons who teach in the common schools in any year is considerably greater than the number of schools. This means frequent changes of teachers and short periods of service. This excess of teachers over schools is found mainly in the country, not in the villages and cities. In Michigan 141 teachers were employed in the course of the year 1891-92 for every 100 schools. In 1886 Calhoun county, in that state, employed 342 different teachers at different times within the year to fill 158 positions; and while the schools of the county

were in session on the average 8.4 months, the teachers served on the average only 3.8 months each.

The first remedy for the sad state of things thus briefly portrayed is consolidation of the country schools. School districts must be abolished, schoolhouses be abandoned, the number of schools and teachers be reduced, and the children be brought together at fewer points in much larger numbers. This subject in its various bearings is considered quite fully in the report of the Committee of Twelve on Rural Schools. There is also every reason to expect that the subject will be brought before the country, and the attention be secured for it that it merits. Two or three brief observations concerning it will answer the present purpose.

In the first place, consolidation is not by any means everywhere possible. On this point physical and social conditions are peremptory. Multitudes of children will be taught in small, ungraded schools, or they will not be taught at all. Secondly, a small isolated school is not necessarily a poor school. Youth in great numbers are taught, and well taught, in such schools. We are not to associate fate with the small school any more than with the large one. Still, unusual effort and wisdom are undoubtedly needed to overcome the unfavorable conditions of the small rural school. Once more, no one should for a moment imagine that the consolidation of schools, even when effected, will prove to be a panacea for country education. When all has been done in the direction of consolidation that is possible, problems will still remain to be solved that are at once difficult and important.

We have been dealing with the subject indirectly and negatively. But when all has been said and done, so far as putting the present material support of the rural schools to better use, the subject is not exhausted. There still remains urgent need of a positive enhancement of resources. How shall this be provided?

The general answer to this question is that all, or nearly all, of the state systems of financial support need to be revised; some of them need to be revised very thoroughly. The subject is an extensive one, and very difficult, and nothing can be attempted in this paper more than to state some of the changes that need to be made.

In the first place, the basis of school taxation in many states is altogether too narrow. The burden of school maintenance is thrown mainly upon small local taxing units, sometimes the town or township, and still more frequently the school district. One of two things happens: either the people are overburdened, or the schools are inadequately supported. At present the greatest inequalities in the rate of taxation and in the character of the schools exist. The state passes a law requiring all towns or districts to maintain schools a certain number of months each year, and then leaves them, regardless of their resources, to struggle with the

question of school support. In Rhode Island some districts are taxed fourteen times as heavily as others to keep up their schools, and Connecticut exhibits a similar disproportion. In New York still wider divergences present themselves. And so in many other states.

The remedy is clear enough. It is to widen the basis of school taxation. Local taxation for schools should neither be abolished nor be reduced to insignificance; on the other hand, such taxation should be employed to a reasonable extent; but there is urgent reason for calling in the large taxing units to assist the small ones. With the exception of cities, towns, and villages, the local school district, in the old sense of that term, should be abolished, as well for purposes of taxation as for purposes of administration, and in its place some larger unit, as the township or the county, should be substituted. It is impossible to recommend a particular scheme; so much depends upon the political institutions and other factors existing in particular states. It is true that there are inequalities in townships as well as in school districts, and in counties as well as in townships; still the important fact remains that the larger the area of taxation the less such inequalities are found to be. Once more, the reasons for calling the state, or the social whole, to the financial support of the rural schools are just as cogent as the reasons for throwing a certain amount of the school maintenance upon the local units.

Inequalities in respect to wealth existing among the smaller divisions of the state are very great, much greater than the inequalities existing in the number of youth calling for education, and in the cost for education, provided it is good education. The Census Bureau does not furnish us with tables showing the average wealth of the country per capita of the population by counties, but it does give us the average per capita-value of real estate, including the improvements. The highest and lowest county averages on this basis will be given for a few leading states.

In Illinois the highest average is \$1,311.90; the lowest, \$164.64. In Massachusetts the corresponding averages are \$1,554.10 and \$466.65; in New York, \$1,733.35 and \$305.80; in Ohio, \$1,562.56 and \$265.99; in Pennsylvania, \$1,049.88 and \$187.36. These statistics tell their own story, but if we had averages including personal property as well as real property, the story would be told in a still more emphatic way.

The different states raise their school funds in quite different ways. It will suffice to speak of the varying ratio of state taxes to local taxes. In the South Atlantic states 38.1 per cent. of the cost of common schools in 1894-95 was raised by state taxation, 51.3 per cent. by local taxation; while in the North Central states only 9.9 per cent. came from the states to 75.4 per cent. from the localities. Some of the states levy no state school tax in any way or form, while North Carolina raises 83.3 per cent. of her total school expenditure in that way. Sometimes a much larger

portion of the cost of public education should be assumed by the state as a unit, and then again a much larger portion should be devolved upon the local taxing units.

Only one point more will be presented. This is the important matter of distributing school funds. While closely connected with the subject last treated, distribution is still a distinct question by itself.

Very strange methods of distribution have sometimes been employed. The most remarkable one that I have ever come upon formerly prevailed in Vermont. This was to divide the state money among the heads of families according to their respective number of children of school age, without directing how it should be applied to its object, or even requiring that it should be applied to an educational object at all. A man might use the money that fell to his share to purchase a brood sow, if he saw fit. A historian of the state, himself a Vermonter, has well remarked: "This singular application of the funds could not have greatly furthered the cause of education, though it may have stimulated the increase of population, for to the largest families fell the greater share in the distribution of the school money." But probably nothing so absurd as this can now be anywhere found.

Many states apportion their general funds to townships or school districts according to their enumeration of youth of legal school age. This is a most absurd method to follow, because it obviously fails to carry the money where it is most needed. For example, two school districts lying side by side enumerate forty and twenty children respectively; one district receives twice as much money as the other, and yet the cost of keeping up the two schools, if they are equally good, is practically the same in one case as in the other. Again, funds are sometimes apportioned according to the number of pupils enrolled in the schools, or perhaps the number enrolled for a fixed period of time. This method may stimulate school attendance, or it may possibly stimulate fictitious enrollment, and it is certainly open to the fatal objection urged against the enumeration method. It does not carry the money where it is most needed. Much the same may be said of school attendance as a basis for apportionment; which is also open to the additional objection that it works in favor of the graded schools and against the ungraded schools, since attendance is much more regular in the one than in the other. It is, indeed, to be said that, on the surface, all of these methods seem to be fair; an average always makes a favorable impression upon the mind of the average man; but a mere glance into the heart of the matter reveals the fact that they are all ensnaring and unfair. They do not bring the help of the strong to the support of the weak. Still more obnoxious is the rule sometimes followed, as it is in part in New York, which distributes the funds on the basis of the last national census. Census population at any time

is but a rude measure of educational needs, while the great relative changes that take place in the course of ten years in different units of distribution stamp it as a most irrational measure.

What, then, shall the method be? After devoting much attention to this question I am constrained to say that the needed relief can be found only in the adoption of the school or the teacher as the unit of distribution; that is, a certain sum of money, large enough measurably to accomplish the purpose, called a "distributive portion," a "district quota," or something else, no matter what, shall be set apart for each school, regardless of its size, that complies in all respects with the requirements of the law. This method is exemplified, though in quite different ways, by the states of Massachusetts, New York, New Jersey, and California. I do not now indorse the technical rules followed by any one of these states; I speak only of the principle involved. It is easy to say that no method based on this principle will work absolute justice; that is not to be expected; but, properly qualified and limited, this principle will not work practical injustice, and it will carry the help of the state or social whole to those localities where it is most needed. Without this principle, at our present stage of social progress, it is impossible to carry out, even approximately, the sound American doctrine that the property of the state shall bear the burden of educating the youth of the state.

The substance of this paper may be summed up in four propositions: (1) The rural schools urgently need an enhanced material support. (2) These schools could use their present resources in a much more productive way than at present, if a reasonable policy of consolidation were carried out. (3) The enhanced support called for must, in some cases, be obtained by employing larger units of taxation than at present, and then again by using smaller units. (4) The method of distributing state funds or income derived from state taxation should recognize the school or the teacher as the basis of distribution.

CLASSIFICATION AND INSTRUCTION IN RURAL SCHOOLS.

BY DR. W. T. HARRIS, UNITED STATES COMMISSIONER OF EDUCATION.

The Committee of Twelve has made a careful study of the defects of rural schools, with a view to suggest practical remedies.

It appeared to that committee, first, that such schools need financial aid. There is on an average less money per capita in country than in city districts. Besides this, there are fewer pupils per teacher. With small

school funds it is not possible to hire skillful and scholarly teachers, nor for full terms.

The remedy for this state of things is obvious, and it is practicable in rich states. The state must come to the aid of the rural districts, and insure it a sufficient fund to employ trained and experienced teachers. Many states have moved in this matter, and many more are able to do so. But will the rural-school problem be solved when an increase of funds has procured good teachers for eight or ten months' annual session?

The committee had arrived at a more serious question. Can a rural school with a good teacher be a good school? It will find in its ten, twenty, or thirty pupils all grades of advancement, from the beginners at five years to those who have had seven or eight years of schooling, and attained the age of sixteen years or more. These pupils cannot be taught in classes to any great extent; there must be many recitations, and consequently short ones. Let there be good teachers, and they will certainly accomplish more than poor ones. But what can a good teacher do in a five-minute recitation? One of the accomplishments of a trained teacher is his ability to probe the pupil's understanding of the lesson and set him to thinking about the relations of what he has just learned to that he has learned at a former time, either at school by study or by experience in the events of his life. But even the skilled teacher cannot, in a five-minute recitation, probe the pupil's knowledge of the lesson and connect it with all its threads of relation. He cannot teach the pupil habits of deeper thinking. Moreover, the pupil, if he recites by himself, or if in a class of two or three, does not gain the great advantages that come from reciting in a class of twenty pupils substantially equal in ability. For each pupil in a class learns as much from his fellow-pupils as from the teacher direct. He can see the one-sidedness of the recitations of his fellows. They have learned some things that escaped his attention, but have neglected others that he has learned well. There is too great a disparity between the pupil's view of a subject and the teacher's view to make a thorough mutual understanding possible, except through the mediation of the class. Each pupil learns more from the teacher's criticism of the work of the others than from the criticism of his own work.

Every recitation reveals to the pupils of the class many points of view that they had missed in the preparation of their lessons; some have missed this point and some that point. They learn also to criticise the text-book and overcome their superstitious reverence for what they find printed in books.

We must admit that even the good teacher is handicapped in the rural school. He cannot use his best devices.

Almost without exception the work of the normal school goes to prepare the future teacher to handle classes. The class is the instrument

presupposed in the school. It is the tool which must be used with skill. But the ungraded rural school affords only five or ten minutes for recitations, and the class cannot be handled with skill in so short a time.

Fully possessed with an appreciation of the value of the class recitation, the earnest reformer of the rural school has proposed to classify or grade it like the city school. But his effort to escape from the evils of short recitations and individual instruction has only thrown him upon a worse evil. He has avoided Scylla by running upon Charybdis. He has brought pupils into classes, but they are of such diverse qualifications that they hinder instead of help one another, and they also balk the efforts of the teacher.

Thus we come from one evil to another in our attempts to remedy the defects of the rural school.

The bright boy or girl, if given a text-book and assigned regular tasks, will make much progress even in the country school, and without the help of the class recitation. The dull boy and the average boy will also do something. It is not the best, but it is worth while even at its worst.

In attempting to remedy this state of things, however, an evil of greater magnitude is developed. Not only in the rural schools of some states, but in the villages of all the states, and also in the suburbs of cities, there are found schools in which pupils are classified in such a manner as to bring together pupils of widely different degrees of advancement—the best and poorest pupils being separated by an interval of a year or two, or even three years. In fact, the classes of nearly one-half of our cities are separated by a year's interval, as in college, and as a consequence within each class there are wide differences of degrees of advancement—as wide at least as the interval between the classes, and sometimes wider; because the tendency is to separate the degrees of advancement more widely as the work goes on. It happens, therefore, that the chief care in the management of the work of instruction in a system of city schools is to grade or classify the pupils in such a manner that the interests of some are not sacrificed for those of others. The effect of placing pupils of different degrees of advancement in the same class will be to urge unduly the backward ones, while the pupils in advance of the average in the class will have too little work assigned them. When bright scholars are kept back for dull ones they acquire loose, careless habits of study. When pupils of slower temperament are strained to keep pace with quick and bright pupils they become discouraged and demoralized. Even when pupils are well classified at the beginning of the year, differences begin to develop from the first day, and after two or three months of good instruction a large interval has developed between the advancement of the slow ones and that of the bright ones. Besides difference in temperament there is difference in regularity of attendance on account of sickness and

family necessities ; these things affect the rate of progress. Moreover, the degree of maturity and amount of previous study develop differences. Classification in a school is never absolute. No two pupils are of exactly the same degree of progress. There are probably no two pupils alike in ability to do the daily work of the class. From this it is evident that there should be frequent reclassification. There should be promotions of the best ones from below into the class above, and a few promotions from the best of that class to the next class beyond. After such promotion has been made through all, or a portion, of the classes of a school from the lowest, each class will find itself composed of fair, average, and poor scholars, together with a few of the best from the next lower class in place of the few that each has lost by promotion. New hope will come to those pupils who were before the poorest in the class, and there will be new stimulus given to the best pupils who have been promoted to a higher class, for they will have to work earnestly to attain and hold a good rank in the new class. But the quick and bright ones thus promoted will gradually work their way towards the top of the class again. The slow ones in the class may be passed by successive platoons of bright ones introduced into the class from below, but they will pick up new courage on every occasion when they find themselves brought to the top of the class by the process of transferring the bright ones who had begun to lead them into too fast a pace. This sifting-up process, as here described, corrects the disease known as "lock-step" in the graded schools. The sifting should take place as often as there develops a decided difference in degree of advancement between the best and poorest pupils of a class. In practice this is found to occur once in two or three months.

The rural schools, when small, do not find it possible to make classes to any great extent, except in reading, writing, and spelling. In the larger rural schools, however, there is an attempt to introduce the city plan of classification, but, as a matter of course, the classes have to be very small. What is bad about these small classes is that the intervals from one class to another, instead of being ten to twelve weeks, as in a good city school, are from one to two years. This works a great evil. It leads to careless teaching on the part of the teacher, who has to adapt his instruction to the average of the class, knowing at the same time that such instruction lacks interest to the best pupils, because they are already familiar with the subjects, and knowing, secondly, that it is too difficult for the least advanced pupils, for the reason that they lack the insight which a year's or a half year's more study has given to the pupils of average advancement. City schools, village schools, and rural schools that grade their pupils with intervals of a year or more between the classes are to be criticised chiefly for this fault. They are called "stiflers of talent" because they do not provide sufficient work for their ablest and brightest pupils, but keep them

marking time with less advanced pupils. Moreover, they discourage the slower pupils by requiring more work of them than they can accomplish.

This difficulty in regard to classification exists not only in public schools, but often in a more dangerous form in private schools. It is, perhaps, the greatest evil at present existing in the organization of the schools of the United States, rural and urban. In the first, second, and third years of primary work classification does not present serious difficulty, because of the greater number of beginners—say, pupils of eight years and under. About 69 per cent. of the pupils in the cities and villages of the country are in the first three years' work; twelve per cent. are found in the fourth year's work, 7 per cent. in the fifth year, 4 per cent. in the sixth year, 3 per cent. in the seventh year, and 2 per cent. in the eighth year. To form large classes and thereby produce economical instruction the pupils beyond the fourth year must be brought together in central schools, and it is to this problem that the attention of state boards of education is called by the Committee of Twelve.

This recommendation of the committee will not seem important to those school directors who fail to understand the value of class recitation and of its dangers when forced on the pupils of small schools of different degrees of advancement. A rural school of one hundred pupils would have, under average conditions, nearly seventy in the work of the lowest three years, and these would make five classes of fourteen pupils each, with intervals of about half a year of advancement—not a very bad classification if readjusted often by transfer of the pupils making most rapid progress into the class above. But there would be only thirteen pupils in the next year's work, namely the fourth. This would give two classes of six or seven each. The fifth year would have seven or eight pupils, and the sixth, seventh, and eighth years all together would have only nine or ten pupils. If three teachers took charge of this central school of one hundred pupils, one could do better work with the seventy in the lowest three years' work than the one who took the highest three years' work with only ten pupils.

The number of rural schools having few pupils may be estimated from the fact that in Rhode Island 158 schools out of a total of 263 have an attendance of less than ten (1895). In Vermont there are 153 of these schools with less than six pupils each (1893); in New York 2,983 are reported as having less than ten (1895). Consolidation by transportation in suitable vehicles at the expense of the state is the most promising remedy, reducing the cost of instruction, and at the same time improving its quality. The increase of villages and cities throughout all regions penetrated by the railroad makes possible this removal of pupils to central schools and the discontinuance of outlying districts in more and more towns every year.

But inasmuch as the evils of classification with wide intervals between classes are not generally understood, it is likely that the concentration of pupils into village schools will not be so great a good as it might be. For it is quite a common belief that the formation of three or four groups or classes for the eight-years course of study is a good thing. Some go so far as to say that it is better than the close grading of the cities. "It is more flexible, more elastic, or more adjustable to the pupils' needs."

These words "elastic" and "flexible" are used in a new and strange meaning here. The best city grading is "flexible" and "elastic," because the intervals between classes are small — only ten or fifteen weeks. It is easy to promote the brightest pupils over such a small interval when they begin to show power to do a much larger amount of work than the majority of the class. They will find it possible to keep up with the average of a higher class. But suppose that the grading or "grouping" has two years' intervals between classes, as it would have if there were four groups in the elementary school — or, say, nearly three years, as it would have if there were only three classes or groups; then it would be a much more serious matter to promote from one class to another, because of the amount of useful matter omitted. Instead of being elastic and flexible, the four-group or three-group system is rather to be called "brittle" and inflexible — a Procrustean bed. All schools at work need constant readjustment of classification, and this can be made when the intervals between classes are at their minimum; thirty classes between the first year and eighth year are possible in large schools in cities.

That all cities do not avail themselves of this possibility is one of the most serious defects in American school supervision.

It is very important, therefore, that the rural schools shall not adopt this evil unnecessarily as they grow into village schools by growth of population and by transportation of pupils to central schools. Keep the classes small in central schools, and do not try to economize by saving in number of teachers until the schools become large enough to permit this without making large intervals between classes.

It is a terrible arraignment of the schools graded on the one-year, two-year or three-year-interval plan to accuse them of stifling talent in the bright pupils and of discouraging the dull pupils until they lose their self-respect.

The old, ungraded school did not commit this error of destroying the habits of industry in bright pupils by yoking them with dull ones, or of destroying the self-respect of the dull ones by constantly provoking comparison between them and their companions unequally yoked with them.

With increase of pupils there ought to come improvement in the instruction of the school invariably, and it will come if the evils of the graded school system are understood as well as are its advantages.

THE KIND OF SUPERVISION MOST NEEDED.

BY HON. HENRY SABIN, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION,
IOWA; CHAIRMAN OF COMMITTEE OF TWELVE ON RURAL SCHOOLS.

The doctrine of supervision is in itself most wholesome and efficacious. It implies uniformity in those things which are essential, freedom of choice in those things which are nonessential, and in all things that enthusiasm and spirit which are created by acting with others for accomplishing a common purpose. This, however, must be granted at the outset. While in many places the schools have been greatly benefited by wise, intelligent, and rational supervision, in other places they have been hindered in their progress, stunted in their development, and dwarfed in their growth by the supervision of the martinet. The narrowness of his purpose, his attention to the minutest details of school management, his attempt by means of rules, regulations, and restrictions to bring all things to the level of lifeless uniformity, are not conducive to the development of strong, vigorous school life. The pedant in the supervisor's office is a nuisance that ought not to be tolerated even for a single day. You may call it close supervision, but it is unjust, inhuman, and in some cases amounts to an absolute tyranny. We do not want this in the country school.

Supervision is a blessing or a curse in proportion to the degree of intelligence and skill with which it is administered. The personality of the supervisor, which someone says "consists of consciousness, character, and will," is worthy the first consideration. He should be selected with reference to his peculiar fitness for the duties of his office. In this respect the city schools have an advantage, arising from the fact that the superintendent is usually chosen from a number of candidates because he seems to be the one having the highest qualifications, while the county superintendent is too often sifted out by the whirligig of politics, with reference to such availability alone, or in order to balance the ticket. The tendency manifested in many states to require some qualifications as to character, scholarship, and experience from the candidate who aspires to the office of county superintendent is one of the most hopeful signs of improvement in the nature and efficiency of rural-school supervision.

The country schools need a supervision which in its entirety and its wholesome effects challenges the respect and support of everyone who is interested in the welfare of the schools. They need a supervision which is broad in its scholarship without being shallow. The supervisor should make no pretense of knowing everything, but he must be well grounded in those studies which enter into the rural-school curriculum. He should have a varied and successful experience in this kind of work before he

enters upon the duties of his office, in order that he may be able to devise and execute plans looking to the best education which it is possible for these schools to afford. A man may know the entire process of manufacturing Bessemer steel and not be a good blacksmith; he may be an adept in the sciences, or at home in languages or literature, and yet not be able to manage a school of forty pupils; so he may be a most excellent disciplinarian, and an exceptionally good instructor, and be lacking in the qualifications necessary to success as a supervisor of a system of schools. With all our progress in philosophy and our study of pedagogy, the dogma of individuality has not received its share of attention. Hence, in selecting a suitable person to oversee a system of rural schools, in addition to a reasonable education, and to a clean personal character, we should look for the power of adaptability to circumstances, and the ability to discern the fitness of things, so that he may accomplish all that which is possible without attempting the impossible. The integrity of his heart, the nobleness of his aim, the honesty of his purpose should be so patent in his life as to render him secure in the respect and confidence of all with whom he comes in contact. He should be ready at all times to assert his rights as an American citizen, and people will respect him the more for it. The people generally have no use for a political coward. At the same time he should concede to others whatever rights he claims for himself. There is no occasion for his engaging in unseemly political squabbles, nor for intruding his peculiar views when they will render him obnoxious or injure his influence.

We regret that the office of county superintendent must for years to come be political in its nature, but the officer himself should be a politician only in the highest and broadest sense of that word. The time will undoubtedly come when politics will be eliminated from the election of school officers. Until then we must make the best of circumstances and elect to the office of supervisor or superintendent persons who carry their conscience into their work, and who, therefore, will, when inducted into office, regard in its fullness their official oath. Such men of either party will conduct themselves as citizens and not as partisans, and will discharge their duties, looking only to the highest welfare of the schools.

The person who is chosen to act as a supervisor of rural schools should have the qualities of leadership developed in the highest degree. He must himself be a thinker as well as a student, and he must be able to incite others to think and study. In the isolation of the country school the teacher too often has no ideals, and consequently no ambition. It is the business of intelligent supervision to suggest these high ideals of work as the end which the teacher must aim to accomplish. Time is often wasted by the supervisor in suggesting new methods to teachers who have no idea that there is any better way than they have been doing

since they obtained their first certificate; he might as well whisper the news of the day in the ears of the dead. I would rather have in a teacher one divine spark of originality, lightened up by enthusiasm and zeal in her work, than all the knowledge that is contained in a thousand pages of the dead lore of the past. I do not by any means wish to be understood as decrying the study of pedagogical laws, but the country school-teacher who is forced to cram herself with the dry words of a text-book which she has not the intellectual power to comprehend, prescribed by a supervisor as a prerequisite for obtaining his official signature to her certificate, is to me one of the most pitiable objects on God's green footstool. The supervision needed in the rural school is one which inspires energy, enthusiasm, and zeal; which awakens a desire to know the best; which says, "Come, let us study, let us think, let us reason, let us discuss." Such supervision opens the doors and the windows, that the light of nature may come in; drives out old traditions, and ushers in the reign of intelligence, knowledge, humanity, and love, which characterize the new education.

Now, as to the purpose of the supervision needed in the rural school. It is here that the most lamentable failure is made. The supervisor visits the school, examines the pupils, looks through the register, praises a few things and criticises many, and, with his little notebook in his vest pocket, goes on to the next district. Has he done all that is required of him? Not by any means. He must note at such a visit the tone and spirit abroad in each school, the relations which exist between the teacher and the pupils, and the morale, which is evidenced by cheerful obedience and strict attention to the business of the hour. If the visit of the supervisor in the country school leaves no lasting influence upon the teacher and the children, it would better not have been made. If he examines a class, it should not be with the narrow purpose of ascertaining how little they know, but with the broader purpose of discovering along what lines they need encouragement, in what respects they are improving, and whether their training is such as to induce power of thought, habits of investigation and freedom of expression, which things are lost sight of in the routine work too prevalent in every section of the country.

The influence of a refined, cultured scholar in the person of the supervisor is not to be lost sight of. Sometimes he is the only medium through which bright pupils receive an aspiration which awakens a desire to attend a school offering larger advantages. The supervisor has a three-fold function. He examines in order that he may test the possession of knowledge on the part of teacher or pupil; he inspects that he may in a measure ascertain the quality of the work and control or organize the management; he supervises in order that as an adviser and friend he may point out errors and suggest remedies, encourage honest efforts, and wel-

come signs of improvement in methods of discipline or instruction. The true supervisor is much more than a teacher. It is only by regarding each of these functions that the supervisor may bring his work into accord with that of the teacher and the pupil, and thus unite for a common purpose all the interests of the school.

Formerly the office of supervisor embraced that of examiner of teachers alone. There are many counties or districts even now in which the fitness of the teacher is determined by the per cents. recorded against her name. This has led to a great evil, in that it induces teachers to study for marks. They study questions, not subjects, and test themselves by the number they can answer. For this purpose books are published filled with nothing but questions and answers. Educational journals crowd their columns with last month's examination questions, and of late they have taken to furnishing answers and solutions, as helps to teachers. As a consequence the rural school-teacher becomes exceedingly narrow, having little depth of knowledge, or breadth of foundation upon which to build her work. She does not cultivate habits of study or investigation. Only an independent thinker can make an independent teacher. Enthusiasm in presenting knowledge is born of enthusiasm in pursuit of knowledge. The prevailing method of examining teachers, as a test of fitness for their work, is an exceedingly ingenious device for enabling them to conceal their ignorance.

The examination has its limitations, but this is neither the time nor the occasion to discuss them. The need of the school is a supervision which can reach beneath this accumulated mass of rubbish, and judge the qualifications of the teacher not alone by what she knows, but rather by what she can do in the schoolroom. The teacher who has crammed for the examination ought to be detected and rejected as surely as the one who fails to meet the prescribed standard. To give the rural school the needed supervision, the supervisor must know what is the criterion of a good teacher and the elements of good teaching. He must possess the ability to select the teachers whom he commissions, not only in accordance with the results of the examination, but having regard to breadth of knowledge, as evinced even in the answers to technical questions. He must be guided not alone by a system of percentages, but by her evident ability to stamp the impress of her character upon her school. He must endeavor to determine the question, "What will be the influence of this teacher over the pupils, and in the community at large?" It is worse than folly for the supervisor to send out teachers who in knowledge, character, or adaptability are poorly prepared for their work, and then by some process of close supervision attempt to correct their errors and to convert them into respectable teachers. Of all the duties incumbent upon the supervisor there is no one which requires more wisdom

and skill, greater intelligence, and the exercise of more common sense than this of determining the fitness of persons to enter upon the work of teaching children.

The supervision needed by the rural schools has still another mission. The low state of public opinion, which accepts the conditions of poor schools as the best attainable, is due to the fact that the school is not appreciated, and that the work which it ought to do is not well understood. The supervision of rural schools should be made to include the duty of awakening public concern, and of strengthening the entire tone and trend of thought, as it is directed towards the promotion of educational interests. This is a new field for supervision, and one in which it ought to achieve most beneficent results. The supervisor of rural schools should be acquainted with the material resources of his district. He should not only know what constitutes good farming, the grazing interests, the dairy, the rotation of crops, but the prevailing industry of that region should be so familiar to him that he can converse intelligently with the inhabitants and convince them that he knows something besides books. The object is not alone to gain an influence over them, but to bring the school into touch with the home life of the community about it. For this reason the supervisor should make himself well acquainted with the prevailing conditions of the wage-earners of his territory, in order that the instruction of their children may commend itself to them as sensible and as calculated to meet their present and prospective wants. New thoughts, better methods, live matter, and stronger incentives must come to the country school through the efforts of rational supervision. The dawn of a new education for these schools will break over the horizon as soon as we can bring to the aid of the teacher the light of science, and the knowledge of common things. It is not to invite the farmer or the miner to the school, but to take the school to the farm or the mine, and to show the pupils that here, before their eyes, are the foundations upon which have been built the great natural sciences of our day. I have only touched upon the remote borders of a subject which opens in many directions. But it cannot flourish under any system of close supervision. The teacher must have great latitude; she must be herself a lover of nature in its various forms and be able to interpret the language of rocks, and trees, and flowers; the running brook, the snows of winter, and the fruits of autumn. The wise and intelligent supervisor aids and encourages her and her pupils and commends her work in these new lines, as he does that included in the regular school curriculum.

The supervision needed by the country school must concern itself also with school extension, lectures, and libraries. The county associations must be supplemented by meetings of the directors and parents for consultation and advice. In these the supervisor must be the moving

spirit. The isolation of the country school can be broken up through the influence of these meetings. The establishment and maintenance of good roads must find in the supervisor a ready and popular advocate. Under the stimulus of his influence the rural school grounds should be made attractive and the school buildings neat and convenient. There are instances on record in which the work of one man has changed the educational aspect of a county, but he had first to gain the confidence of the people, and they responded by electing and re-electing him for a long series of terms.

I am inclined to close as I began. The country schools do not need what we ordinarily call close supervision. It is as unsuited to their wants as would be the close grading of the city schools. The supervision needed by the rural schools must be intelligent and rational. It must abound in common sense, be able to adapt itself to circumstances, be strong, manly, and vigorous, so that the character of the supervision shall commend the wisdom of the supervisor. There must be added also an element of permanence in office, so that the supervisor may feel that he has time in which to work out his plans, and to demonstrate the feasibility of his theories. The supervisor must be kept in the field every day of the school year, when it is possible. He should have all the clerical help he needs, but the worst use that can be made of him is to keep him in the seclusion of his office, at work over papers and reports. The vacations should not be entirely free from field work, for then he should be with the people and school officers, looking after school grounds, advising with directors or trustees in regard to the repair and improvement of buildings, or the erection of new ones, consulting with them as to the choice of teachers, the text-books most suitable for their schools, and the general educational interests of the district.

The supervision which I have attempted to mark out is that of a live, enthusiastic man, in sympathy with educational progress, in touch with the common people, consecrated to his work, who thinks no sacrifice too great, no labor too severe, when made in the cause of the common district school.

INTELLECTUAL NEEDS OF RURAL SCHOOLS.

BY D. L. KIEHLE, PROFESSOR OF PEDAGOGY, UNIVERSITY OF MINNESOTA.

The most attractive part of any civilization is the material instruments which it has devised, and which are indispensable to its progress. This is equally true of that part of our civilization which is included in our school system. We have schoolhouses, in beauty, comfort, and healthful-

ness, such as the world has never before seen ; we have text-books which, in elaborateness, simplification, and taste, excel all before them ; we have apparatus that presents in distinct form, and for separate study, every form, every phenomenon, and every principle known to natural science ; we have organization, systems, and methods all elaborately wrought out and offered for use.

It is assigned to this part of the general discussion of the rural-school problem to consider what is necessary to make all this material effective in the proper education of the children of rural schools ; in other words, what intelligence is required to wield these instruments of education, and what spirit must be embodied in this material mechanism in order that it may serve its purpose. We must begin by calling to mind the purpose of education, and what, in its application to rural schools, it ought to accomplish for them.

In general, it is to introduce the child into the civilization into which he has been born, to give him power intelligently to appropriate its accumulated experience, to understand its peculiar problems, and to make most skillful use of present possessions for his higher comfort and well-being. In short, it is to prepare him for the most complete living within his environment of which he is capable—for a complete living as a human being, satisfying the demands of his physical nature in material comforts, and of his social, æsthetic, and moral nature in cultivated contact with the life of the race.

Now, education considered as a development of the powers of the individual as man or woman is quite the same the world over ; but as the unifying of the individual with his environment, the methods must change with changed conditions. Without doubt the most marked separation exists between rural and town or city life. The latter is based on social relations. Its spirit is interdependent and co-operative. The former is based on the soil, and its spirit and tendencies are largely mechanical in occupation, and socially segregating and independent.

This general problem of education applied to our rural schools, therefore, is this, how to prepare the youth of the country to live their lives most fully and worthily—not as toilers, and not for mere sustenance, but as men and women of the race, who in taste and understanding are to live the larger lives of the social and intellectual world.

It is, doubtless, the most difficult of all undertakings in education to enable each individual to live his own best life, within the limitations of his subjective and his objective environment. The natural tendency is to fix upon some accepted and traditional standard, to expend all energy in readjusting one's personal characteristics, and in escaping one's surroundings in order to be what another is. Hence, the poor covet wealth ; the wealthy covet nobility ; the mechanic would be a professional man, and

the boy on the farm would abandon the farm for what seems to him the paradise of city life.

Educational systems have contributed their full share to this mischievous tendency, having done much in educating our youth away from their native environment without educating them into another. The school represents some ideal of social life that is accepted as worthy the ambition of the cultivated and governing classes; hence the schools set the fashion, and what the schools do not recognize is impliedly unworthy.

Not many years ago our education recognized only the demands of professional life, and the culture, knowledge, and training that were especially appropriate to professional life were offered indiscriminately to all classes, with the result that all positive intellectual movement was toward professional lives.

Later, when agricultural life began to assert itself and demanded recognition in our education, there were established so-called agricultural colleges, which were nothing more nor less than the classical school with its atmosphere of ancient form and spirit, with some theoretical and practical agriculture attached, yet offered as if for those whose intellectual and social conditions excluded them from the more respectable subjects of abstract and classical study. The men in charge represented cultured life, and the industries as found in the great social and industrial centers. The result was that they invariably educated away from rather than into the rural life and its occupations, which they were created to serve, and were, therefore, justly condemned by the farmers whose sons they had undertaken to educate.

In our city schools we have made great progress in broadening our curriculum of education, by which we undertake to prepare each individual for a successful and contented life in his particular environment, whether industrial or professional, whether as employer or employé. But in the country, and in the interest of agricultural life, we have just entered upon the solution of this phase of our educational problem. Our district school is an ungraded arrangement of matter and method adopted from the schools of the city. The governing impression seems to be that the country is but a suburb for a sort of probationary life for the paradise of the city, and the country school a trial school for the teacher who hopes for promotion to the grades of a city. But the worthier view, and that which has inspired this discussion, is that it is an independent life of itself, as dignified and as worthy of ambition as any other, and, accordingly, that its education should be organized and conducted in its interest, in the application of all facts and laws of science, economics, and æsthetics for its improvement. Thus far the most valuable contributions in this direction have appeared in those forms of education belonging to adult life.

First are the agricultural colleges and schools. Imperfect as the earlier movement was it did send out men who were nearer the people and more interested in agricultural education than the most of their teachers. Following this we have entered upon the second and more effective stage—the conduct of the agricultural school.

The agricultural school has cut loose from all the restraints of the classical schools, and, following the example of manual training schools, it organizes its course of study wholly in the interest of agricultural life. It lays down as its fundamental principle that agriculture in rural life is an industry that offers, beside remuneration and healthful employment, the fullest and finest exercise of the scientific ability in the study of nature, of æsthetic taste in the adornment of home, and, in this age, abundant opportunity for social and literary culture in the multiplication and extended circulation of books and periodicals.

In such a school the boys are those who have had their taste, ideas, and experiences cultivated by life-long contact with farm life. They are educated in immediate contact with the farm. Their education consists in the applications of science to the material of rural life and agricultural industry.

The product of such a school is a cultured American citizen, living on his farm, conducting it with intelligence and scientific insight into the various processes that are going on about him, and with the enjoyment that comes from intelligent self-respect and application of the operations of nature.

The next contribution that has been made to rural education has been in farmers'institutes. These are short sessions of farmers, generally of the most enterprising and intelligent class, who are addressed by scientific agriculturalists upon the practical matters of agricultural life. Here you will see the most complete examples of object lessons and laboratory practice. At one lesson the whole class is gathered about a cow, or a sheep, or a hog, discussing its characteristics, its heredity, and the best methods of its culture. At another, they study the dairy and its products. At a third, the housewives are gathered about the instructor in domestic economy, who not only illustrates processes, but gives the scientific explanations. The result is that we have farmers who not only use more rational and economic processes, but have the enjoyment that comes from less physical and slavish drudgery and more intellectual and social intercourse.

It has been the universal rule that the children are served last. Education had made great progress among men long before the schools for children felt the influence of progressive movements. After the same fashion, the schools for country children are still under the restraints of ancient methods, and rigidly exclude the very methods and the matter by

which their parents are made intelligent and practical. They may read the stories of Homer, the tales of Shakespeare, and study the geography of Asia, but to bring into the schoolroom a squirrel, a bird, or a bug would surprise the neighborhood, and to take the children into the fields and by the streams to study the formation of land surface and the effects of water currents would hazard the salary of the teacher for taking holiday without authority.

I submit, then, that the first intellectual need of rural schools is a curriculum of study furnishing materials and methods that are natural to the life they live. It is quite unnecessary, at this time, to elaborate any outline or course of study. I need only refer you to the ample provision of material made by your Committee on Rural Schools, whose report is now before you.

I come now to the second of the intellectual needs of rural schools, and upon which depends the efficacy of all else—I mean, of course, the teacher. A civilization in either of its types can only be introduced and engrafted by life that embodies its spirit. The machinery of civilization set up among a barbarous people will not develop the industries. The literature of the world set up in libraries will not change rudeness to culture. The Bible itself, with all the developed products of Christian life in literature, churches, and ceremonies, will not of itself purify and elevate the lives of heathendom. It is only life that begets life, and that of its own kind. It is only as the institutions and products of civilized life are made the instruments of the life itself that they can be effective in elevating others to the same plane. This law holds equally good in respect to rural schools. The civilization of the age has ennobled its institutions, means of expression, its literature in recorded experience, discoveries, inventions, and speculations, its science and its philosophy; and for its schools it has systems, architecture, text-books, apparatus, and libraries, but all these, to be effective in educating the youth, must be the instruments of influence in the hands of a teacher whose ambition kindles its like, and whose attractive power in thought and feeling draws to itself and molds to like forms the spirits of youth with whom it comes in contact.

All this is a very old doctrine, exemplified a thousand times, from the days of Socrates in Athens to Abélard in France, all the way down to the humble service of our university settlements, as well as in the whole history of Christian missions.

The first service required of the teacher in rural schools is to represent in himself aspiring intelligence and character, by taking the children of the soil, living their segregated and mechanical lives, and introducing them to the society, thought, and achievement of the race.

The second service required is that he represent in himself and in his teaching the dignity and honor that attach to the occupations of country

life. Youth gets its ideas from the standard set before it. When manual labor is performed by slaves and menials, freemen and the cultured avoid it. When manual training came to be represented in our public-school system by scholarly and cultivated men, who handled the saw, the shovel, and the plane in company with the pupils, then labor took honorable rank, and students became skilled mechanics. When domestic economy was given a place in our schools, and our girls, who had never seen kitchen work done by any but uneducated servants, and that most mechanically, saw their teachers with skill and intelligence do the same, and make it the topic of interesting observations and an application of their knowledge of chemistry and hygiene—it was at once taken out of the rank of menial employment and given honorable rank as a worthy pursuit. It must be in this same way that country life and country pursuits will be prompted by the educating influence of rural schools. When the teacher with scholarship and a character that commands respect and admiration will in like manner represent the spirit of rural life, and utilize the environment of rural life for the exercise of intellectual power and industrial skill, we shall have not only educational results, but, what is more, we shall see agricultural life taking higher rank and given greater consideration by the introduction into it of skill, intelligence, and self-respect. that is begotten of education.

It is not in my mind that rural schools shall educate for country life, as if to exclude their youth from the pursuits of the city, but that they shall do their share in the magnificent undertaking that seems to be the peculiar calling of our public-school system, namely, to conduct its education to the end that all artificial distinctions, by which men are ranked in honor and social respectability according to the accidents of nationality, birth, and vocation, may be obliterated, and men ranked according to character, and the virtues of philanthropy and intelligent industry. We have already done more than all the world before us. For our daughters as well as for our sons, for all of every religious faith, for white and black, for rich and poor, our schools are all free. From the narrow lines of classical culture we have broadened to include all languages, all literature, all science, and all history. From the single occupation²—the clerical—as the only one requiring highest culture and greatest learning, we have by our education given social and intellectual standing to a multitude of industries, in which are represented the best culture of our schools. Our education should do the same for rural life and its industries, when intelligence shall apply itself to making it, first more remunerative, then more comfortable in the hygiene and ornamentation of the home, and, finally, in bringing it into social and intellectual touch with the great world about it. Then, when rural life is made congenial to intellectual and social culture, and when its occupations have been dignified by the exercise of the skill

that comes from education, we may leave our youth to satisfy their own preferences in the selection of an occupation according to their several tastes and natural fitness.

In this discussion thus far we have had in mind the individual teacher in the schoolroom, but, upon reflection, we shall see at once that this individual teacher is but a factor, a part of a system, including the school that prepares him, and the supervision that directs him. I am, therefore, of the opinion that in securing for our rural schools the teaching they require we shall have to face the question of special preparation of teachers for them. In the history of our modern movements for the enlargement of the scope of education we see that as long as the classical and scientific school prepared the teachers it was quite impossible to develop manual training schools, but as soon as teachers of manual training could be sent out from the schools of manual training, they and their schools took educational rank. So, too, as long as teachers of agriculture were prepared in the classical and scientific schools, the farmers complained, and justly, too, that their boys were turned to every vocation but that of their fathers. Thus far our training schools for teachers have been organized for, and conducted after, the ideal of city schools and city life, and the complaint is universal that the disposition of teachers is more determined as they approach graduation to escape the conditions of country life and the country school. Shall we say that all this is a necessary condition of things, and must we allow that as we perfect our system of education we must intensify the prevailing disposition of our modern civilization to abandon country life and crowd into cities? I do not believe that we are committed to this unnatural and dangerous alternative. On the contrary, the indications are very distinct that the reaction from the centralization of social cast in industries and learning has begun, that the claims of the country are as distinctive as those of the city, and that we are required to provide for rural schools in courses of study and in teachers with the same care that is shown the mechanical industries in manual training.

This, however, is a problem that belongs to our normal schools and which I commend to their attention with a reference to the suggestive and valuable contributions made to this subject in the report of the Committee of Twelve on Rural Schools, especially the two articles found in the appendix, namely, "School Courses" and "The Farm as a Center of Interest."

Next is the intellectual need of adequate supervision. The superintendent must not be a mere representative of country politics, nor of the unprogressive, unintelligent drudgery of common farm life; neither should he be a mere representative of the schools and courses of the city. He ought to embody the spirit of farm life, and in his selection of teachers and in his supervision he should contribute to the ideal of rural school life.

To discuss the obstacles that beset this movement would take more time than belongs to this paper. However great the difficulties to progress, they are disappearing. The great intellectual and political movement, that has begun in the country and has already made itself felt in higher education, will soon apply itself to the interests of its common schools, and will require a corresponding consideration of this important and peculiar department of our educational system.

THE MARCH OF THE IDEAL.

BY CLINTON SCOLLARD, CLINTON, N. Y.

I.

No hoary sage, enamored of gray eld,
Howe'er so keen his eye,
Has ever pierced the Past's obscuring veil,
And, in the mythic morning-time, beheld
Where the primeval founts of Knowledge lie.
In vain does man assail
The starry bastions of the midnight sky,
Seeking the source of light,
The awful Infinite ;
And so in vain
Man's rapt desire to read the riddle plain,—
The source of that incalculable store
That in the brain foregathers more and more.

II.

Have we not known,
In the lush upland regions overgrown
With beech and bracken, in a quiet dell,
Mossed at the edge,
And overhung with sedge,
A tiny pool, a crystal woodland well,—
A little thing half-hidden from the day?
"A little thing," we say ;
Yet from so small a source
May sweep a Hudson in majestic course,
A Mississippi take its seaward way!

So is it with that immemorial spring
Hid in the illimitable uplands of the Past,—
The well of Knowledge. Variant and vast,
Through the successive ages widening,
The floodtide from it cast!

III.

Ere Susa was, or gardened Babylon
Lifted its pillared porches to the sun,
Amid the cumbrous coil of human life,
The interblended calm and strife,
Were men who stood above, apart,
Mighty of brain and militant of heart,
The freshening founts to swell
The onward sweep from the sequestered well.
There was a time
When pulsed the current like a choral chime
Celestially sublime ;
When ran the tide as clear
As is the hyalescent atmosphere
Round St. Elias in Alaskan snows,—
The Periclean age of high repose.
Again the flood grew broad
What time the imperial Augustus awed
The outland peoples with his mighty sway,
And, on Judean hills, the "Lamb of God,"
A little child, within the manger lay.

IV.

Who giveth to this tide?
Prophet and poet and the argus-eyed
Searcher into all problems intricate
Whether they be of science, or the fate
That on the soul doth wait.
Happy the age wherein
These high-inspired and lofty figures dwell !
Their truth triumphantly assoils the sin ;
The stream flows broader from the living well.
One haunted by the old Greek loveliness,
Who has his final home
In alien loam
Beneath the many-battled walls of Rome,
Sang sweet of Beauty's purifying power ;

Another voice, of rapture none the less,
Long stilled for aye
By the chill billows of blue Spezzia bay,
 Loud chanted Justice and man's equal dower.
With cup at lip, heroic Socrates,
 Shakespeare, the myriad-minded one,
 Grave-thoughted Emerson,—
Such souls as these
Leave to all time the richest legacies.

V.

Whichever be the plan,
Nature through mankind, or through Nature man,
'Tis Nature is the great idealist,
Fashioning from out the somber morning mist
Mountains of rose and hills of amethyst ;
Molding with incomparable toil
From out the base essentials of the soil
The immaculate lily-tower,
All grace and sweetness centered in a flower ;
Prisoning within one small wood-warbler's throat
Ecstatic note upon ecstatic note.
'Tis those close cleaving unto Nature, then,
Who are the master spirits among men,
Idealists,
Holding their noontide and nocturnal trysts
With what is lofty, elemental, pure,—
The essences divine that shall endure.

VI.

Upon them let us keep
 Our vision fixed while flee the fateful years,
As doth the mariner on the storm-vexed deep
 Upon the beacon-star by which he steers !
Their shining names
Are ours as well as Fame's,
Whate'er the beauteous mold in which they wrought
Their mind-ennobling thought ; —
Whether with Phidian skill
In marble reproducing mortal will,
Or limning, Raphael like, the human form
Till on the canvas it seems live and warm,

Or welding states fragmental into one
As did our hero-hearted Washington.

VII.

Alas, for obdurate souls that will not heed
The seer's exalted voice of prophecy,
That will not follow where the climbers lead
Along life's radiant hilltops, glad and free!
But plait a crown of cruel thorns for those,
The men of mastery and of rapt insight,
Who, fearless, face the blinded bigot's blows,
And stand, unswerving, for the truth and right;
Who place the good of all o'er that of self,
And honest penury o'er dishonest pelf;
Who keep alive the patriot's holy ire
Against the truckler and his low desire,
And hold the honor of a nation's shield
Should bear no stain upon its fair white field!

VIII.

Have we not read how great Canute of old,
Sitting within his chair of beaten gold
Beside the shore where dashed the thunderous sea,
To show how small is earthly sovereignty
'Gainst Nature's laws and their imperious sway,
Bade the upheaving waves their course to stay?
"Thus far," he cried, "no further shalt thou go!"
But lo,
The impetuous forward flow,
With unabated bound,
And deep, triumphal sound,
Swept on and broke the royal seat around!
As impotent, and no whit wiser, they
Who deem that puny human power can stay
The spirit's course on its celestial way!

IX.

Life's real
Outreaches longing hands for the Ideal;
Never was nurtured an aspiring soul
That did not dream of a more lofty goal,
With recompense more glorious set therein,
Than the clay-cumbered feet of man may win.

Within the artist's mind the imaged saint
Is fairer than his finest brush can paint ;
The poet's fancy far outwings his word,
And the musician's music, what is heard ;
And never lover lived who did not grace
With ideal beauty the beloved face !
It is this touch of heaven that bids us hope
By sure degrees we may ascend the slope
That leads to those aerial summits whence
The spiritual inner sense,
Mounting beyond the mortal vision-line,
May soar to the divine !

X.

Oh ye who, valiant-hearted, in the van
Of human progress march,
Let not your eyes from off the hills be drawn,
But watch the aureate splendor of the dawn
Transfigure all the sky's expanding arch !
'Tis the eternal, slow-unfolding plan
That the Ideal, like the beaconing light
Of morning o'er the height,
Shall guide mankind forever up and on.
If toward the gleam be turned the lifted face,
Behold it shall be written of the race :
*They live and shall live, for those cannot die
Upon whose altars burn ideals high,
Who worship nothing base!*

*HAS THE HEART OF THIS PEOPLE CHANGED TOWARDS
ITS SCHOOLS?*

BY CARROLL G. PEARSE, SUPERINTENDENT OF SCHOOLS, OMAHA, NEB.

[STENOGRAPHIC REPORT.]

The question is, I think, a pertinent one for us. The message I bring is a plain and homely one, but I believe it touches the schools very closely — the schools of the whole country.

The public-school idea was present from the beginning in New England. As soon as shelter and food were provided, the school was established. The child must learn to read that he might not be ignorant of

the holy Scriptures and the capital laws. He must learn some useful employment that he might not become a drone or a vagabond.

That learning might not perish from out the colonies, the university was set up, where the ministers of the new land might receive such training as had made the clergymen who came with the immigrants a mighty force in shaping the policies and institutions of the growing commonwealth.

This brought a new need. Some school there must be where boys could get such learning as would fit them for entrance to the university.

Here, then, was the complete foreshadowing of our modern school system — the common schools for giving the elements of knowledge; the secondary schools (then called grammar schools), where boys might be fitted for the university and get some knowledge of the humanities; the university, giving the higher education; the training in the home of the hand and judgment through the teaching of some craft, which has been revived in our day in the manual-training and trade schools.

The idea of universal, popular education took firm hold upon the public policy of the states and upon the imagination of the American people. Provision was made to teach all children.

As the ball rolled, it grew. New studies were added from time to time. Arithmetic came early, with writing, completing that trio, the "three R's." Geography presented itself, and was admitted, and English grammar came also. Algebra and bookkeeping sometimes crowded in. Physiology and hygiene claimed attention. Then music, which had long been used as a recreation and inspiration, began to be taught as a science. Drawing followed for its use and for its influence. The training of the hand and eye received more attention in the way of manual training in the high schools and in the lower grades. Sewing and cooking began to be added here and there. Physical culture assumed a place.

The best teachers had greatly increased skill over the ancient pedagogue, and competition for the best teachers among the more enterprising schools had largely increased teachers' salaries. Following the example of other great business organizations, superintendents of schools had been employed to have general care and direction of the large school systems. Teachers of special subjects had been freely employed, as well as supervisors to direct work in music or drawing, or other special branches. And all this had come about with very little opposition. The new studies as they came in received a few shafts of ridicule. But the heart of the people was with the schools. They were the schools of the people, and to him who came and pleaded in the name of the schools nothing was denied.

The schools were riding on the crest of the wave of prosperity and public favor. The people of the nation were busy increasing their wealth

and developing the resources of the country. The money for the schools was freely furnished, and often far too little scrutiny of its expenditure was exercised.

But a few years ago conditions changed. Prosperity fled. Development was checked. The wealth of the people ceased to accumulate. Capital fell idle or began to be eaten up by operating expenses. The grasshopper of taxes, which had not been felt in the midst of general prosperity, now became a burden. Not only were financial conditions distressing, but in the general slackness of business people had time to think of their unhappy condition. The time was no longer filled by the pleasing employments of selling goods to paying customers, clipping coupons, or collecting interest on mortgages. Deprived of accustomed employment, the people were uncomfortable, and had ample leisure to realize their unhappiness to the full. A critical spirit filled the air, and this spirit did not fail to take account of the public schools.

They have been denounced for extravagance and waste; as the leech that was taking the life blood of the body politic; as the nursery and hot-bed of "fads;" as the agency which is setting young people above their station, and rendering them unwilling to take up the disagreeable but necessary duties of life as their fathers did. For these few years the schools have borne heavily the yoke of public condemnation. In one great city it has been proposed to decrease the salaries of teachers one-third. In hundreds of cities and towns salaries have been reduced. Cities have dispensed with their supervisors of music and drawing. The high school has been attacked as contrary to the spirit and intention of a proper public-school system.

This storm of criticism, and these drastic measures, some of which have been proposed, some put into effect, have fairly given rise to the question whether or not the heart of this people has changed towards its schools.

It is a question which each of you will wish to answer in the light of his own experience. Having raised the question at this time, however, I think I shall make bold, for the purposes of my argument, to give an answer, and to give it in the negative. I do not believe that our recent unpleasant experience indicates a loss of public regard for the schools, or of belief in them. It may indicate that we have not, in the conduct of the schools, kept closely enough in touch with the people, for whom the schools exist and upon whose loyalty and favor the schools must rely for future well-being. It may indicate that we have not taken the people enough into our confidence as to our plans, and as to what we were doing with the money they were providing for our use. It may indicate that we have been somewhat too prone to act upon our own initiative, and to set about the operation of new plans without first securing the advice and

consent of these masters of ours. It may, I believe it does, indicate all these things, and so, when stress and grinding times have come, we, and our plans have been too nearly strangers to those we have been called to serve. I believe, if we learn from the discomforts of the past few years that the people must accompany the schools upon the path of progress, the suffering will have been for our enduring profit.

But here among ourselves it may be proper for us to go a little farther and acknowledge that sometimes the finances of the schools have not been well managed; that sometimes we have paid too dear for our whistle. This has sometimes been true because the broth was brewed by too many cooks; because the sovereign people dabbled too freely in the management of details. In these cases the result has been much as it would be if the merchant or real estate agent, those eminently respectable and responsible members of the city council, had assumed responsibility in detail for operating the new engine at the city waterworks. But often it has been true because of a lack of proper knowledge as to what education should cost. The member of the board of education, holding his office for three years, cannot be expected to have this expert knowledge. He is an authority on matters pertaining to his own business; but this is not his own business, it is the public business. The need of expert advisers in municipal affairs is coming to be recognized; men who know how many gallons of water per day for each inhabitant a city needs; what street cleaning should cost; at what rate a city might profitably make its own gas; at what cost it should be paved. In the same way a knowledge of the cost of education is coming to be a part of the needed equipment for a man who aspires to superintend a system of schools, just as is a knowledge of the subjects his teachers are to present to their pupils, or of the faculties of the mind, and the laws of the physical and mental growth.

It has not been, often it is not now, the fault of superintendents that they do not have this knowledge. There has been no school in which to acquire it, except the dear school of experience. But in some way the knowledge must come. The area of low barometer is central over the financial side of school management just now. More injury seems to threaten from ignorance of values and of proper cost than from ignorance of school subjects, or of the laws of development. Those connected with the schools cannot afford to be at ease in this matter until the normal cost of education per child in average daily attendance is as well known among us as the cost of hauling freight per ton per mile is known among railroad men.

Agassiz has told us that science is comparison. The best means of comparison so far has been afforded by the tables published in the reports of the United States Commissioner of Education. These cannot, however, go into such detail as is often desirable, and the process of their

issue is necessarily slow. The best source of information for purposes of comparison should be the reports issued each year by the leading cities, and by the various states. These reports have not been by any means uniform in plan, nor have they made clear the same items of income and outgo. For this reason instructive comparison has been difficult, often impossible.

Cannot this association bring about some uniformity in these fiscal reports? Might not a committee, appointed by this body, consider the matter of a common plan and form for state, for city, and, perhaps, for village school financial reports? Would it not be a long step toward providing a standard for comparisons, and thus reducing the matter to a scientific basis? Might not the National Educational Association in this way just now render a distinguished service to the cause of education?

EDUCATIONAL EXTREMES.

BY O. T. CORSON, STATE COMMISSIONER OF COMMON SCHOOLS,
COLUMBUS, O.

Educational extremes have their origin in educational extremists, of whom there are many varieties. They can, however, be grouped into two general classes—those who are perfectly satisfied with what has been done in the past, and those who propose and demand undesirable, unreasonable, and, very frequently, impossible things for the future. The first class is fairly represented by the man who absolutely refused to look at the new moon because of his unbounded admiration and love for the old. The motto of this class is: Whatever has been is right and cannot be made better. In this class are found the educational fossils of the day, who bear the same relation to the educational world that the rock fossils do to the physical world—show plainly the different stages of growth and development.

The second class, having once glanced at the new moon, seem to be possessed with the idea that it is their own creation and therefore worthy of their veneration and worship. They are so infatuated with the new that they fail to realize their very close connection with the old, for which they henceforth have nothing but scorn and contempt. Their motto is: Whatever has been, or is, is wrong and must be changed.

Between these extremes—satisfaction with everything as it is, with no desire to investigate with the object of improvement, and dissatisfaction with everything as it is, with the constant attempt to change educational policy, courses of study, and methods of teaching to suit the demands of

visionary theorists who have neither experience, foresight, judgment, nor common sense, the teachers of the public schools are constantly in danger, on the one hand, of falling into that state of self-satisfaction which means professional decay and death, and, on the other hand, of becoming the victims of a policy so unstable as to result in the most superficial work in the class-room and in the loss of confidence on the part of the people in their public schools.

At the risk of being considered too conservative by many, and even non-progressive and old-fogyish by some, I must give expression to my honest conviction that, in the first place, there is in this country today a tendency to go to the extreme in the educational policy, proposed by some, of practically ignoring the common people in the management and control of the common schools which they own and support, and which, I am thoroughly convinced, are very near their hearts. The conclusion at which some school superintendents seem to have arrived, that the public schools cannot trust their own product, is a sad comment either on the schools themselves or on the lack of judgment which has led to such a conclusion. I have nothing but words of severest condemnation and denunciation for the interference of the professional politician in the management of the educational affairs of his community. I believe that the very safety and perpetuity of our government demand that our public schools be kept free from the influence of both political demagogues and sectarian fanatics. But in our attempt to free ourselves from the reign of the political demagogue it is neither desirable nor necessary that we ignore the people and institute the reign of the educational autocrat whose opinion is law and whose action is final. It is well to remember that good schools and all true and enduring educational progress and reform must have their roots down deep in the hearts of the people. If half the time and thought now spent in devising some plan by means of which teachers and superintendents can be entirely relieved from responsibility to the people were spent in developing a strong educational sentiment among the people and thereby bringing them into closer sympathy with the work of the schools, the cause of public education would be greatly advanced.

I believe, therefore, in boards of education elected by the people and responsible to the people; in superintendents who are ready and willing to be advised and directed within proper limits by such boards, and in teachers whose tenure of office shall be secure enough to encourage faithfulness and efficiency, but not so secure as to make possible permanency in spite of laziness, incompetency, and inefficiency.

It is in the formation of a course of study, however, that the extremist finds his greatest opportunity. It is admitted by everyone that a course of study should be in a certain sense a growth, but it is also true that it

has its limitations. The old régime of the "three R's" was in many respects narrowing, but it is possible that even this extreme, to which no sensible, progressive person has any desire to return, may be preferable to the opposite extreme, to which we are now tending in so many schools. It is at least reasonable to conclude that it will take several round-tables like the one held at Indianapolis last February to determine the exact limitations of the "three R's." I am certain these limitations were not definitely settled at that meeting.

The greatest objection to overloading a course of study is found not in the inability of pupils to get the scores of lessons assigned in the great multiplicity of subjects, but in their failure to develop, in the getting, any mental power or ability to do continuous, independent, hard work. The little girl was not far wrong who, going home from an intermediate grade with her arms full of books, and after spending two hours in going over her lessons with her mother, replied to the suggestion that she now understood them by saying: "Understand them! why, we are not expected to understand them, we are just expected to get them!" It is in the getting of lessons so numerous that the undertaking or digesting of them is impossible that, in my judgment, is found the danger of the present tendency of going to the extreme of undertaking to teach a little of everything to the boys and girls of our primary and intermediate schools. If the active, earnest, and really successful teachers of these grades could be heard in a committee of the whole, I am positive that their united voice would be in favor of less quantity and more quality and thoroughness in their work, and they would be joined by a united request from the best high-school teachers in the land that their schools be supplied with pupils who know a few things thoroughly and as a result of such thoroughness have the power to do independent work, the lack of which power is today driving thousands of students from our high schools and colleges.

The extremes to which we are tending today will, if unchecked, soon furnish our country with the educational hothouses and forcing apparatus so aptly described by Charles Dickens. Hear his description and judge whether it does not in some respects apply to the conditions existing in some of our modern schools: "Dr. Blimber's establishment was a great hothouse, in which there was a forcing apparatus incessantly at work. All the boys blew before their time. Mental green peas were produced at Christmas, and intellectual apparatus all the year round. Mathematical gooseberries (very sour ones too) were common at untimely seasons, and from mere sprouts of bushes under Dr. Blimber's cultivation. Every description of Greek and Latin vegetable was got off the driest twigs of boys under the frostiest circumstances.

"This was all very pleasant and ingenious, but the system of forcing

was attended with its usual disadvantages. There was not the right taste about the premature productions, and they didn't keep well. Moreover, one young gentleman with a swollen nose and an excessively large head (the oldest of the ten who had gone through anything) suddenly left off blowing one day and remained in the establishment a mere stalk. And people did say that the doctor had rather overdone it with young Toots, and that when he began to have whiskers he left off having brains." It is possible that some of our modern schools, with their overcrowded courses of study, also have a tendency to overdo it with similar results.

As one extreme naturally necessitates another, it is not at all surprising that we find over-crowded courses of study accompanied by the proposal of unnatural and unreasonable methods of carrying them out. Those who go to the extreme of insisting that everything shall be taught, when presented by a practical teacher with the impossibility of doing it, bring forward the beautiful doctrine of correlation, and explain away all the difficulties of presenting so many subjects by showing that all the knowledge of the universe can be grouped around one common center. As to what that center is no two persons agree, and while the principle of uniting to a reasonable degree subjects that have a natural connection is already practiced by all successful teachers, the difficult problem of how to correlate the correlators remains unsolved.

It is a matter of sincere regret to many earnest teachers that so important a principle as correlation is often made a laughing stock by the senseless extreme to which it is carried by some who have evidently only very recently discovered its existence.

In fact, this extreme is equaled only by the extreme to which that greatest of all studies—the study of the child—is carried by some persons who are engaged in the work, not that they may actually know the child in his real condition, but that they may have the reputation of being original investigators. To a teacher who really studies children as they are, some of the so-called modern discoveries resulting from original investigation are, to say the least, very humorous. To be told that a careful and scientific investigation has revealed the wonderful fact that Santa Claus appears to have a strong hold upon the hearts of boys and girls of all ages makes us tremble at the dense ignorance in which we have all been living. To know that children actually like colored pictures better than black and white ones, and that, up to the exact age of twelve, pictures of cats and dogs performing tricks are more acceptable to them than works of art, is certainly very important to the earnest teacher who is striving to train intellect and develop character.

It is encouraging to know, however, that in the midst of these extreme tendencies, of which the time allotted only permits a mere mention, there is genuine progress in the work of education, and with united effort on

the part of teachers and patrons it is possible so to conduct the public schools that they shall have each year that genuine growth and improvement which come neither from a foolish worship of the old nor a sentimental love for the new, but from a just and sensible appreciation of the good there is in both.

WHAT NOT TO DO.

BY MISS ESTELLE REEL, SUPERINTENDENT OF PUBLIC INSTRUCTION, STATE OF WYOMING.

After listening to these eloquent and masterly addresses, I feel that I have nothing *new* to offer you, but, coming from the West, as I do, I want to tell you what the West demands of the East. Our population in the far West is largely composed of young men. A great many young men took Horace Greeley's advice, and the result is that, with us, young men hold most responsible positions.

We want the East to send us young men and women properly equipped for the battle of life, and by that I mean young people whose educational foundation has been well laid. We do not care for the graduate of a high school, college, or university, who has a diploma with a long list of 'ologies, but who has no practical knowledge. To help us and help themselves they must be clear-headed, accurate students, who have been taught to think instead of memorize.

Looking backward through the reports of the thirty-eight years' existence of the National Educational Association, many volumes and almost countless pages of positive advice have been published and many new methods advocated. May I venture to call your attention at this time to a very few of the things which are to be avoided.

Do not sacrifice the practical for the liberal. With a most profound regard for the liberal in this world, I have yet a profounder regard for the practical.

It was said by Herbert Spencer that many of the miseries of human society are due to over-legislation. It may be the case, as some would have us believe, that some of the evils of life are due to over-education.

We certainly cannot have too much education, but our education is often not well-balanced. It is not the education which makes us masters of ourselves, our capabilities, and our conditions. Our education should equip us for the particular work in the world for which we are destined, but many of our pupils leave school with as hazy an idea of their capabilities as they had before entering. The time is coming when, to succeed, our young men and women must be able to do at least one

thing well, and our education should develop and encourage this quality. Something definite, or special, is looked for in everyone. In the West we want the education that develops personality and makes men useful. Today the demand is for men who are not afraid to work, or, as we say out West, men who can "rustle."

To develop a pupil's personality is one of the most practical things a teacher can do. One reason why I mention this is because, in the West, above all things we want leaders. We want men who know what they can do and who have high ideals.

There was a professor of English literature and rhetoric in Bowdoin College who had, as pupils, Franklin Pierce, Longfellow, and Hawthorne. Hawthorne, the greatest prose writer America has ever produced, and Longfellow, our finest poet, received their inspiration from that quiet, retired teacher in Bowdoin. Scores and scores of our great men have been inspired by such men as Thomas Arnold and Horace Mann, teachers who developed personality.

It is only by this means that one's heart is inspired ; therefore, do not sacrifice your personality. You know in your own life that such and such a teacher aroused you. Other teachers were very learned, but their personality did not seem to impress you at all. We know it is personality that counts in the world ; therefore, our education should develop it.

Next, do not sacrifice your individuality to new methods. Discriminate among methods, and use those which are best adapted to the child's needs. Whatever methods the originality of the teacher may devise, the idea of stimulating thought and inspiring new life should be always present. It is mental power that the world needs, not acquirement of knowledge.

Again, do not make the teaching profession a stepping-stone to something else. There is, among teachers, a greater amount of undeveloped talent than in any other calling. I have known, and I now know, teachers who would, under different conditions, have made their mark in journalism, in music, in business, who are lamentable failures. And here I want to say to you, fellow-teachers, that if your heart is not in your work, if your soul does not prompt it, drop out of the ranks of the teaching profession. We are not all of us "born teachers ;" we have not what is called the "knack of teaching," and when we find that the work is uncongenial, unsatisfactory, we should take up some other occupation, for we shall never find happiness in the work. "Blessed is he who has found his work ; let him ask no other blessedness," said Carlyle. A multitude of women who, upon leaving school, are obliged to provide for their own support, cannot enter the professions ; they must enter upon some occupation which does not require a long course of special training, and they turn to the profession of teaching as yielding the quickest

returns. When women feel, as men do, the permanent necessity of fitting themselves for their life work, and choose a profession because of their ability in a special line of work; when they stop to think that the first considerations which ought to determine the choice of teaching as a profession are, first, love of the work and love of children, and, second, physical health and energy combined with clear-headed common sense, they will have a foundation upon which may safely be reared a superstructure that will reach from the "lowly earth to the vaulted skies." Then, and not until then, shall we stand in the golden age of great achievements.

Now a word, not to the teachers, but to the school boards. At the present time the question of civil-service reform is being discussed in all parts of the country, and the general verdict of the people is that the basis of civil-service reform is the proper reward of merit, and that faithful government servants are not to be dismissed by reason of the advent of a political party to power. Is it not time to apply the civil-service-reform idea to our own profession? If, in our general government, it is deemed a wise policy to have clerks appointed for at least four years, why should it not prove a wise policy to employ teachers for the same length of time? The profession of teaching requires as careful preparation as any other calling in life. A good teacher must be an expert in his knowledge of human nature; he must know about the developing processes of the human mind; he must understand the philosophy of education, and he must not only be familiar with the best methods of transmitting knowledge, but he must discriminate between methods and be able to employ the best at the right time. Years ago it was believed that what one knew that he could teach, but I am happy to say that now a distinction, and a wide distinction, is made between knowing and the ability to impart knowledge. The appointment of teachers for not less than four years would certainly increase the effectiveness of their work. Frequently, during the last months of school, teachers are in such an unsettled condition, owing to the uncertainty of retaining their positions, that they are unable to do their best. In the schools of a western city there was a young woman in the primary department who was, in many respects, an ideal teacher. Her teaching was skillful, and her success with her pupils apparent. Yet, for several months preceding the close of each year, she was in a continuous state of nervous excitement through fear of not being re-engaged. She, and thousands of teachers like her, are entitled to as much consideration by those in authority as any government official or clerk.

And now, in closing, do not think that the days of heroism are over, and that the calling of a teacher requires no sacrifice. I remember visiting a Wyoming country school; after a hard day's trip, in which I had driven sixty-five miles, fording the Platte river twice, I came to a cabin, half dug-out, consisting of one room divided by a curtained partition;

here the teacher boarded, and that night I slept on the floor rolled up in blankets. The next morning I started with her to visit her school, and such a pitiful school building! A rough board room, with dirt floor, and a sliding board for a window, an old stove on three legs, and, for pupils, two forlorn little children. This teacher rode eight miles a day, carrying a child on the horse behind her, fording the Platte river morning and evening; often cold and wet, she had her own wood to cut and her fire to make. Yet she hoped to retain her school another year, as she had a helpless father dependent upon her, and she was so pleased that the directors had promised to put glass in the window and lay a floor, and the children were doing so nicely, she told me. If this is not heroism, I know not what is.

If we believe in our common schools, and believe that they are the hope of the country, we must believe that the teacher has a mission, and a high one. As was said by Benjamin Rush, "There is but one method of preventing crime and of rendering our republican form of government durable, and that is, by disseminating the seeds of virtue and knowledge through every part of the land. I am so deeply impressed with this opinion that, as the best proof of my affection for my native country, my advice to the guardians of her liberties would be, 'Establish and support public schools in every part of every state in the Union.'"

When this is done, and teachers are chosen because of their love of the work, there will be developed men and women whose strong personality will stamp itself upon the nation's history, and in each individual

"The tongue will be framed to music,
And the hand be armed with skill;
The face be the mold of beauty,
And the heart the throne of the will."

THE EDUCATIONAL OUTLOOK.

BY WILLIAM B. POWELL, SUPERINTENDENT OF SCHOOLS, WASHINGTON, D. C.

[STENOGRAPHIC REPORT.]

The outlook, what is it? It depends upon the point of view very largely. Each man who talks will talk from his own point of view. To me the outlook is encouraging; not altogether satisfactory, but very promising. Twenty-five years ago the public schools educated only the upper 40, 50, or 60 per cent. of the pupils who were talented, and barred out by a system of examinations and promotions the 40 or 50 per cent. for whom really the public schools exist in this free nation, which is controlled by

these people. This has been changed, in part; it is changing rapidly, and that is why I say the outlook, to me at least, is encouraging. The thought of the day is what will best suit the child, and so the child has been set uppermost in the minds of men and women who are teaching school; and, when the child is studied, we begin to see how we have been proceeding, and how we ought to change what we have been doing.

And lo, what a change has come over this country in fifteen years, in one important aspect—that the school exists for the child, and not for itself. It is a wonderful thing, but you cannot study the child without discovering that he is delighted with the world around him, with things that he sees, with things that he handles, with things that he can make; more delighted in these things than he is in marbles. The children are using their hands in the primary schools in making things and in adjusting things; they are using their eyes in seeing things; they are using their little feet in going after things; they are using their hands and eyes and feet, in correlation with the brain, for the acquisition of knowledge, and while they are acquiring knowledge in this correlated effort they are making mind. This is the correlation that is at the basis of all human education, correlation of hand and body with mind in the process of knowledge-getting, and in the process of mind-making. Thus the girls move along the road of knowledge, learning to read and write, and learning to cook. The boys engage in the shop, and boys and girls of all ages engage in manipulating with the hands, in the use of the whole body, in making and in doing—with the result of the greatest happiness in the world to the child; with that infinite happiness with which the boy plays baseball; with that infinite happiness with which the boys and girls play tag; and all the time with no loss to the actual gain of knowledge; with no loss to spelling, but an actual gain; with no loss to penmanship, but with an actual gain; with no loss to a knowledge of history and grammar, but an actual gain; all along the line an actual gain. This is the outlook from my standpoint. From my point of view the child is happy; the child likes to go to school. He didn't like to go to school, with its punishment and credit marks. I believe the child would rather be in school than out of it, where school is properly conducted. Make your schools attractive and interesting to the children, and they will be filled. It can never be done by compulsion. It will be done only by teaching the child as God intended he should be taught. Study the child, and see how he thinks. There are things being accomplished by the study of the child. That is what we are accomplishing by making a study of the child. We are learning what he ought to know; we are learning what he wants to know, and we are learning how he can know the most easily and the most naturally.

This, to me, is the outlook. To me a great benefit has come from manual training. This puts manual training in the primary school, where it belongs. This puts manual training in the hand of the child when the brain is forming, when his hand will help to make the brain. This makes the kindergarten what it ought to be, and gives every child the blessed privilege of going to the kindergarten, where his hand, his eyes, his feet, his brain, and his heart shall be trained in correlation, making a man of him right through. You know that is the civilization that has developed in the middle states, where men's brains and hearts and hands work together. And you know how that civilization has swept across the continent to the other sea. The grandest civilization that the world has ever seen is that made up of a correlation of the hand and brain, because they have worked together. You remember that other civilization in the South, where they had slaves who did the manual work, and the educated did nothing but think; they did not work. One civilization is made up of that grand correlation which the modern primary school gives to every child. The other civilization was made up of a segregation of one line of activities and a suppression of the other.

The outlook to me is encouraging, because I see that the primary school with all these improvements is growing in influence and power. More men and women are believing in it. All this has emancipated the pupil, who was a slave before. Formerly the teacher was simply a master. We have come to believe that one great trouble with all our schools is that we do not know enough to teach school. It is perhaps one of the encouraging features of the general outlook today, that we believe we must know more to teach school. And so I say the great blessing of emancipation has come to the teacher, and teaching school is not a burden any more, but one of the most delightful professions in the world, when carried on from this point of view.

Now, what has become of the three R's? Why, our best graduate from the colleges ten years ago could not read English as well as our fifth-grade pupils can today. Boys from the grammar schools or high schools fifteen years ago could not write English very much better than first and second-grade children do today. Today the child learns in school to think and act and do—to create. The child has become a character. He has become an independent thinker; and the child has been doing this form of work better than ever he did it before. I am talking from my own experience; I do not know what yours has been. Our schools are a very different thing from what they were twelve years ago. A school is not a place for tasks. Any school is not what it ought to be where the children do not attend as willingly as they will hunt squirrels or go fishing or play tennis. Why should it have been a task all of these years? Why should it have been necessary to keep a

gad in the schoolroom to make boys and girls learn when they delighted to hunt birds' nests? And why shouldn't the child delight in school?

No, it will never be a task for the child to learn, if he is taught rightly.

*SHALL AMERICAN HISTORY BE TAUGHT IN CROSS
SECTIONS OR IN PARALLELS?*

BY JAMES M. GREENWOOD, SUPERINTENDENT OF SCHOOLS, KANSAS CITY,
MO., PRESIDENT-ELECT OF THE ASSOCIATION.

[STENOGRAPHIC REPORT.]

Within the space of 290 years is included the history of our country—a history clearly lying within what one may call the historic period, not covered by the dim, uncertain guesses at the truth. One of the living questions is, How shall each one of the common branches be taught? And this inquiry is as applicable to teaching the history of our country as to any other branch that engages the attention of American teachers.

The statement of the question on the programme, "In cross sections or in parallels," is significant. The mere announcement is enough to attract the attention of all persons present interested in the teaching of history. Were I to ask those of you who are teaching United States history, if fifteen anecdotes were to be related by the same individual, and he would start in and give a little introduction to the first anecdote, and then drop it and take anecdote No. 2, and then pass to anecdote No. 3, and so on through to fifteen, with a slight introduction to each, and then return to the first and give a little bit more of it, and then to the second, and so on—would it be an interesting manner of relating anecdotes? Just think of this for a moment!

Is this not the same in principle as the method by which the history of the United States is studied? Perhaps this plan of historical study is the best we have yet thought out. I leave it here for the present. But the one who destroys ought to be able to reconstruct—to put something better in the place of that which he destroys.

All recognize the importance of giving the boy or girl at first a general survey of the history of our country.

There are but two or three subjects in our common schools that touch the moral nature of the child. He is touched through literature and history, and also through personal influence. His moral nature is not inspired much by arithmetic, and I cannot find that he is influenced largely by grammar and other subjects he pursues. In a country like

ours, where the citizen ought to understand not only present issues, but also past ones, and the great crises through which the nation has passed, it is imperative that the history of our country should occupy a prominent place in the common-school course.

Then, first let the pupil take a rapid survey of the history of this country, and then take it up in what I have denominated *parallel lines*. Let him learn how the nation has spread from a few settlements along the Atlantic coast out over this continent. This is true territorial growth. Once started on that part of our history, carry it through from what it was to what it is. He will learn how these great areas were acquired, and what led to their acquisition, and the results. This is simply a suggestion; I have not time to enumerate details.

Another point regarding the settlements along the Atlantic coast: How did the people begin to go into the back country, and how did the back country trade with those nearer the seashore? What were those little Indian trails, those paths blazed upon the trees, the going up stream in a canoe, or walking up, and there trading with the Indians, and then floating down to the settlement again? How were these things done? Compare that early beginning with what we have today. Think of it! Twelve million horse power of steam bringing the back country into the cities and towns, and only eight million horse power engaged in the manufactory of the products of this country. Think also of the difficulty of travel in going back only a few miles from the first settlements in those days, as compared with the means of communication from the East to the West, from the North to the South, from British America to the capital of Mexico, in these days. Take into consideration all the questions when the pupil has commenced to study the means of travel and the channels of trade in the light of their present development. Every department of our history should be studied on parallel lines with every other department. And when once the study of trade and travel and traffic and of commerce, not bounded by the sea; but encircling the globe, is seized upon, a faint conception is lodged in the minds of our boys and girls how the products of one country are exchanged with the products of the world.

Milwaukee is a city of 250,000 people, a center of intelligence, of art, of culture, of influence, refinement, and progress. Behold what her citizens have done in fifty years! Truly have they made a magnificent city.

Once, in conversation with Mr. Charles Dudley Warner, he said, "We have to come to this western world to see cities building;" and how true it is! Take the little huts of 250 years ago, then a hundred years later, even of fifty years ago, and see what has been the advancement in rural and public architecture. One of the grandest lessons in progress is taught in the structure of our buildings, both public and private.

Take up the political history of our country. Study it from the begin-

ning to the present time. Study it clear through. Show how it was ; how it grew ; what it is now ; what it was when it started in Massachusetts ; what it was when it started in Virginia ; what it was as Jefferson understood it ; what it is now.

United States history can be divided into ten or twelve parallel lines, or perhaps a less number. Certainly it is true that by studying history along parallel lines the striking facts in connection with each parallel can be easily strung together and better remembered. It is historical evolution. Ladies and gentlemen, I leave the question with you.

SOME TENDENCIES OF MODERN EDUCATION.

BY JAMES A. FOSHAY, SUPERINTENDENT OF SCHOOLS, LOS ANGELES, CAL.

The present rushing age of progress, with its great wealth and enthusiastic people, and its many improvements in method and direction, necessarily makes changes in our educational policy. As we stand on the verge of the new century and look back, we note that the ideas generally held today concerning education and the purposes to which their educating influences should be applied are greatly in advance of the ideas of former times ; and this fact gives us glorious hopes of the future.

One marked tendency of the times is toward a universal diffusion of education. At the beginning of the present century our people, as a whole, had the elementary public school only ; the colleges could benefit few, except the sons of the wealthier classes ; but now a complete system, from the kindergarten to the university, is free to all.

Not only is education more widely diffused than formerly, but its character is greatly altered. Two and one-half centuries ago, when the free school was established in the New Haven colony, there was little difference of opinion as to what should be taught. Since then many customs, religions, and prejudices, and some of the worst *isms* of which we can conceive, have come to this country, making the conditions very different, and thus demanding of the schools work along new lines to meet these conditions.

Our experience has taught us that the first work of the school is to make American citizens ; and to that end the modern education is placing great stress upon teaching the obligations and duties of citizenship ; not only in the higher grades, but in the lower grades also. The children of today are the hope of the nation ; and those who have the administration of school affairs have realized the necessity of teaching them to be loyal and devoted to their country's interests. They are taught not only to read and

study the constitution, but to realize their obligations to support and defend it. They understand that this nation is a grand and noble co-operative association, and that they are soon to be members of this association, entitled to all its privileges and subject to all its responsibilities.

We have just celebrated our nation's birthday with festivities, rockets, bombs, and illuminations, showing our joy and gratitude that the labors of our forefathers have been so fruitful, and that the anticipations of the founders of the Republic have been realized. The observance by our schools of other special days set apart for the states and nation, the birthdays of our noted men, and days commemorating epochs in our country's history, is doing much to inculcate in the children the purely democratic ideas of our people. The sentiment of patriotism is fostered, too, by the fact that day after day the children work in school buildings over which the "Star-Spangled Banner" floats, and that they are taught gladly to salute it and pledge to it their allegiance.

Another important feature of education at the present day is the amount of attention given to child study. Teachers in the primary grades are paying more attention to the teaching of children than the teaching of subjects. They are studying the children, to know their needs, instead of dealing out in a certain order, without regard to the pupil's previous preparation, that which is prescribed in the course of study. Modern education does not consist in assigning pages of a text-book and then hearing the recitations, but in the development of the children; and this requires that the teacher should know the necessary conditions for the best growth. A knowledge of the psychology and the physiology of childhood is essential to one who would teach in the schools of today. Modern research is furnishing reliable information that mind growth and body growth are not independent, but that they operate together. Teachers, physicians, and mothers are assisting the leaders in child study, in collecting data needed to perfect the science. Thus there is being given to the world a new educational philosophy, designed to assist in bringing the highest development to man. Its importance is recognized not only in state, county, and city organizations for child study, but in the department of the National Educational Association devoted to that purpose.

It is this thoughtful consideration of the nature and needs of children that has led to the introduction of industrial education, and we are pleased to note that every year sees more and more attention given to this work, not so much to fit pupils, while at school, for mechanical pursuits, but as a means of mental development. Industrial education has passed the experimental stage, and is received for its value in disciplining the intellect and training the hand.

Manual training schools should not be considered as trade schools,

unless they are places where regular trades are taught; and such schools are usually private. We do not attempt to teach trades in our public schools any more than we attempt to make lawyers or doctors; but the knowledge obtained in the manual training exercises of the general school courses will prove beneficial not only to mechanics, but to professional men and employers. This knowledge makes a bond of sympathy between employer and employé, and will do much towards closing the gap between labor and capital. This addition to our courses of study assists not only in preparing bread winners, but in preparing citizens useful to society and the world.

There seems to be better preparation and equipment in this regard for the kindergarten and high school than for the primary and grammar grades. The cities, however, are adopting courses of work for all grades, and before long the famous sentence of Dr. Woodward, of St. Louis, "Put the whole child to school," will be realized.

Society in the past has looked down on the man who wore the soiled clothes of the mechanic and the large boots of the rancher; it should be understood that hand work is in reality brain work, and the more brain in the hand the better it can accomplish what has to be done. We are rectifying many such abuses, which have been prevalent in our country, by inculcating in our public schools the principle that true and noble manhood deserves as full and prompt recognition on the ranch and in the workshop as in the pulpit or the office.

Manual training is an illustration of the practical tendency of modern education. The world says to the young man or woman, "What can you do?" not, "How many subjects have you taken?" Our schools, which are for the people, must furnish the education demanded by the people; therefore, growth through self-activity of body and mind by means of organized play, occupations, etc., is carefully put forward in the kindergarten; different forms of manual training are taught in the primary and grammar grades; in the high school the commercial course is made a part of the curriculum, and technical training is being given in our colleges and universities. The same practical tendency appears in the increased attention given to the natural sciences. High schools and colleges which formerly gave but a few months to these subjects now have full scientific courses.

But the fact is recognized that the training of the mind and hand is not sufficient. This age is asking for *men*; not professors, not scientists, but men of personal worth and stability, who will not be swayed from the truth and right, and who will see that justice is not perverted and that public offices are not given to spoilsmen. They must not only be intelligent, but honest. Honesty is as essential to business as the plumb line to the mason. We cannot afford to send educated rogues out of our schools.

A tendency of modern education is to pay more attention to moral training, to the education of that finer part which is to furnish the motive for using all that is learned in other lines.

Discarding examinations as the basis for promotion, and causing the promotion to depend upon the fidelity and success of daily work, has done much to remove deception on the part of the pupil. It is realized that ethical teaching must come mainly, not from text-books, but from the noble and gracious personality of the teacher. The teacher must inspire to high ideals, and be what we would have our children become. Examining boards of education are beginning to see that the first qualification of the teacher is a personal character above reproach. The teacher must be the living example of morality and correct dealing, and improve the grandest opportunity for doing good by sending her refining influence to the parents and the home.

Heretofore too much attention has been paid to the cultivation of the intellect, without directing the knowledge to anything beyond an intellectual occupation. The tendencies of modern education, as we have seen, are to remedy this, to have more of the practical and less of the theoretical; also to teach the "dignity of labor," and the value of occupations other than those purely mental, and to inculcate morality and patriotism. Modern education aims, in short, to discover and satisfy all the needs of the pupil, both those growing out of individual nature and those resulting from his present and prospective environments. These tendencies are some of the most important and helpful ones; there are others, some of which are less favorable, which time will not permit me to discuss.

THE TWENTIETH CENTURY SCHOOL.

BY JAMES L. HUGHES, INSPECTOR OF SCHOOLS, TORONTO, ONT.

1. The schools of the twentieth century will be *free*. The nineteenth century schools are called free because attendance at them is free. The child will be free in the twentieth century school. Free growth is the only full growth. Subordination dwarfs the human soul at any stage of its development. There will be no truly free men till the children are made truly free. The coercive, mandatory, compulsory spirit will become but a shameful memory, when teachers aim to develop the divinity in the child instead of making their supreme purpose the restriction of its depravity. What weak, imitative, conventional, indefinite, unprogressive, dependent, servile men and women most schools have made of the beings who were originally created in God's own image! How much worse they would

have been if they had been subject to school discipline during all their waking hours! How original, self-reliant, self-directing, and progressive they might have been! How much of independence and helpfulness and executive tendency they had when they first went to school compared with what they had on leaving school! The schools should not be catacombs in which are buried the selfhood, the originality, and the executive tendency of childhood. Schools should be gardens in which each child grows to be its grandest, most complete self. The child can never become its real self so long as adulthood blights it and dwarfs it by daring to stand between it and God.

Liberty is the only sure basis for reverent, co-operative obedience. Anarchy is not born of freedom; it springs from coercion. It is a poisonous fungus that grows from the tree of blighted liberty. It grows rank and noisome from the sap that should have developed stately trunk, spreading branches, and rich foliage. Fungi come not on the tree of full, free growth, but where blight has brought decay and death. Conscious subordination secured by coercion blights and dwarfs the tree of liberty.

Liberty does not mean freedom from law, but freedom through law, in accord with law. There may be life under law, or deadness under law. Law itself may be used to develop or dwarf life. Its true use develops life, and power, and freedom. Falsely used as coercive restraint it weakens human character. Human control, like divine control, should be prompted by love, based on love, and exercised in love. Loving sympathy is man's strongest controlling force, as well as his greatest life-giving power. Divine law is often necessarily restrictive of wrong, but it is lovingly restrictive. It is stimulating and growth-giving; never destructive. Coercion may repress evil; it never eradicates it. Coercion never made a child creative, and creative power is the central element in education. Coercion does more than restrict the power of the child: it corrupts its ideals. The common and unnatural dread of divine authority arises from degradation of human authority into unreasoning, unloving coercion.

The greatest improvement yet wrought by the new education is the altered attitude of adulthood towards childhood in disciplining it. The reformation of the coercive ideals of adulthood has only well begun, however; the twentieth century will complete the reform. When adulthood recognizes divinity in each child and learns that the highest function of training is to develop this divinity, not merely to restrict depravity, then will the schools become what Froebel aimed to make them: "Free republics of childhood."

The dominating elements in a child's life are love of freedom and productive activity. The unity of these elements is the only basis for

true discipline. Spontaneity in productive self-activity develops active instead of passive obedience, co-operation instead of obstinacy and stubbornness, activity instead of inertness of character, energy instead of indolence, positiveness instead of negativeness, cheerfulness instead of dullness, independence instead of subserviency, and true liberty instead of anarchy.

The truest educational progress of the ages has been toward harmony between control and spontaneity, guidance and freedom, obedience and independence, submission and liberty. Restriction, coercion, and domination must be removed from the list of disciplinary agencies. Restriction dwarfs, coercion blights, and domination destroys individuality. Across the end of every schoolroom, opposite the teacher's desk, should be printed the motto: "The school should be a free republic of childhood."

2. Teachers will not try to dominate the interest of the child in the twentieth century school. The pupil's self-active interest is the only persistent propelling motive to intellectual effort. It alone makes man an independent agent, capable of progressive upward and outward growth on original lines. It alone stimulates the mind to its most energetic activity for the accomplishment of definite purposes. Self-active interest is the natural desire for knowledge appropriate to the child's stage of evolution, acting with perfect freedom; it is the divinely implanted wonder power unchecked by restriction and undiminished by the substitution of the interests of others.

The development of self-active interest is the highest ideal of intellectual education. School methods in the past have substituted the teacher's suggestion for the child's spontaneous interest, and have thus rendered it unnecessary, if not impossible, for the pupil's own self-active interest to develop. Interest is naturally self-active, and it retains this quality in increasing power, unless parents or teachers interfere with its spontaneity. "Every child brings with him into the world the natural disposition to see correctly." The most unfortunate children are those whose untrained nurses, untrained mothers, or untrained teachers foolishly do for them what they should do for themselves, and point out to them the things they should see for themselves, or, worse still, things they should not see at all at their stage of development. Mother and child should not always see the same things in their environment. "See darling," may prevent the development of the child's power to see independently. The child's own mind should decide its special interests.

Most parents and teachers make the mistake of assuming that they should not only present attractions to the child's mind, but also arouse and direct its attention. Whenever this is done by any agency except the child's own self-active interest, its power of giving attention is weakened.

No two children should be attracted by exactly the same things or combinations of things during a walk in the country, or in any other gallery of varied interests. The special selfhood of each child sees in the outer what corresponds to its developing inner life. The individual power to see in the outer that which is adapted to the development of the inner life, *at present most active*, is the arousing source of all true interest. When a teacher substitutes his own interests for those of the child, the child's interest is weakened and made responsive instead of self-active. Under such teaching the real life of interest dies, and teachers, after killing it, have in the past made energetic and often fruitless efforts to galvanize it into spasmodic responsive action. Allowing the motives of others to stimulate us to action is no more true interest than allowing other people's thoughts to run through our minds is true thinking. The responsive process in each case is really prohibitory of the real self-active process which lies at the root of true growth.

The teacher of the twentieth century will multiply the conditions of interest. Whatever he can do to make the child's external environment correspond with its inner development he will do carefully, and attractively. He will know that, if the conditions are appropriate, interest will always be self-active, and that only by its own activity can it develop power. Responsive interest never develops much intensity, energy, endurance, or individuality.

When teachers complain that children are not interested in the work, their statements are usually incorrect. It would be more accurate to say the children are not interested in the teacher's work. Adulthood must not interfere so much with childhood.

3. In the twentieth century school the child will be trained to find most of its own problems. The child discovers its own problems before it goes to school. When it reaches the school its problems are showered upon it by the teacher. This difference in educative process is the chief reason for the rapid development of children before they go to school compared with their development afterwards. Before the twentieth century ends it will not be correct to define a school as a place in which self-active interest is checked, originality condemned, and brain development and co-ordination sacrificed to knowledge-storing. If anyone claims that such a definition is unfair to the nineteenth century schools, let him consider carefully what the condition and character of a man would be if he had been kept in school during the whole of his waking hours till he was twenty-one years of age. It will not always remain true that the race shall receive its brain development and co-ordination, and its individual character force, chiefly outside of school. The schools of the coming days will not weaken minds by the processes of storing them.

The power of problem discovery is much more useful than the power

of problem solution, both to the individual and the race. Problem discovery is more educative than problem solution.

In the near future the pupils will find most of the questions which they and their companions have to answer in daily work or periodical examinations. They will value the answers, too. They will require training in this work, but in giving such training teachers will have the pleasant consciousness that they are working with God and not against him.

The race creeps where it should soar because the child's natural power to discover new problems is not developed. The wonder power of childhood, which Mr. McChoakumchild proposed to destroy, is the source of greatest intellectual and spiritual evolution. We fail to reach our best individual growth, and our highest fitness for aiding our fellows in their upward progress, on account of our intellectual and spiritual blindness. We are surrounded by material problems, intellectual problems, and spiritual problems which are never revealed to us, but which we might see and solve if our power of discovery had been developed in the schools as assiduously as our mind-storing was carried on. Greater power of problem discovery will lead to increased power of problem solution, and larger capacity and desire for mind-storing.

4. Teachers will distinguish clearly between responsive activity and self-activity, between expression and self-expression, in the twentieth century school. The neglect of selfhood and the warping of selfhood have been the greatest evils of school life in the past. Self-activity includes the motive as well as the activity. It must be originaive as well as operative, or selfhood is not developed. Even kindergarteners often fail to see the full meaning of Froebel's fundamental process of human growth, self-activity. The highest ideal of executive development given by any other educator is co-operative, productive activity on the part of each individual. Froebel's ideal is co-operative, productive, *creative* activity.

Activity, even in response to the direction or suggestion of the teacher, is infinitely better than the old-school processes of information—reception, in promoting intellectual development and in co-ordinating the motor and sensor departments of brain power. Every method that tends to make the child an executive agent is based on a productive educational principle. But there is a wide and vital distinction between responsive activity and true self-activity.

Each individual has three elements of power—originaive power, directive power and executive power; responsive activity does not demand the exercise of originaive power at all, and develops directive power imperfectly. The central element of selfhood is originaive power. A man's originaive power constitutes his individuality. Originaive power develops, as all other powers develop, by full opportunity for free exercise. Froebel made self-activity the fundamental law of growth, with the purpose

of developing the complete selfhood of each individual. Unless the self of the individual is active, the development is partial and defective in its most important element. There are yet few school processes or methods that demand true self-activity. True self-activity includes the motive that impels to action as well as the resulting act. In every study, and especially in every operative study, the originaive and directive powers should act with the operative powers. Education is defective in its most vital part, if originaive power is not developed.

Teachers should test every process in their work by the attitude of the pupil's selfhood in relation to it. Is the pupil's selfhood passive or active? Is his activity responsive to the suggestion or instruction of another, or is it the result of an effort to accomplish a purpose originaiving with himself? Does it result from outer stimulation or inner motive? If action results from outer stimulation, what is the nature of the inducement to activity? Is it mandatory or reasonable? Does the external influence coerce the pupil or merely guide him? Does it develop interest or weaken it? Is it a temporary motive which logically tends to make the pupil self-active and gradually gives place to inner motives and interests that continue the action spontaneously, or does it leave the pupil inert and passive when the external stimulus is removed? Can activity induced by commands, or by personal power, will, magnetism, or other influence of the kindergartener, teacher, or parent, be made as energetic and as definitely productive as true self-activity in the acquisition of knowledge, in the development of the brain both in its sensor and its motor departments, or in defining the individuality of the child? It is only by thus testing their own work that teachers can be aroused to the energetic mental condition that leads to reform and discovery.

One of the commonest fallacies in the list of educational theories is, "Expression leads to self-expression." Expression and self expression are the results of two widely different intellectual operations. Self and expression should never be divorced. Expressive power has been trained, so far as it has been trained at all, independently. It has not been related to the selfhood of the child. The theory has been: Train the power of expression, and the selfhood will in due time develop and be able to use the power of expression we have so thoughtfully provided for it. The amazing stupidity of this course has begun to reveal itself. To some the revelation of the folly of training expressive power and neglecting the selfhood that is to use it came with such force that it led them to the other extreme, and they have propounded the maxim: "Develop the selfhood, and expression will take care of itself." This theory is infinitely nearer the truth than the old one—the one still practiced almost universally. It is true that clear, strong thoughts never lack expression.

Henry Irving was right when he said: "If you are true to your individuality, and have great original thoughts, they will find their way to the hearts of others as surely as the upland waters burst their way to the sea." But it is also true that the schools should cultivate the powers of expression, and add as many new powers as possible. Every form of expression should be developed to its best limit by the schools; expression in visible form by construction, modeling, painting, drawing, and writing, and expression by speech and music, should receive fullest culture in the schools. To add new power of expression opens wider avenues for the expression of selfhood and thereby makes a greater selfhood possible. The supreme folly of teaching has been to attempt to cultivate the powers of expression and neglect the selfhood that has to use them. It is not wise in correcting this mistake to make another, by leaving developed selfhood without the best possible equipment of expressive power. Self and expression cannot be divorced without weakening both of them.

The revelation of the utter folly of training the powers of expression and neglecting to train the selfhood at the same time has been almost entirely confined to the forms of visible expression. There are many good schools in which writing, drawing, and other forms of visible expression are now used from the first as means of revealing selfhood, to enable the pupil to make his inner life outer, but in which the processes for developing the powers of oral expression are still as completely unrelated to selfhood as they were in the darkest days of preceding ages. The processes of culture of the powers of oral expression have undoubtedly improved, but still the dominant principle is the fallacy, "Expression will lead to self-expression." The schools train in the interpretation and expression of the thoughts of others, in the vain hope that to express the thoughts of others in the language of the authors will give power to express orally in good form the original thought of selfhood. There can be no greater fallacy. Actors have more power than any other class to interpret and express the deepest and highest thoughts of the greatest authors, but, although they are accustomed to appearing before large audiences, very few of them have well-developed powers of self-expression. Responding to the motives of others does not cultivate our own motive power; allowing the thoughts of others to run through our minds does not make us original thinkers; expressing the thoughts of others does not develop the power of self-expression.

5. The school of the twentieth century will give increased attention to physical culture, to arrest the physical deterioration of the race, and to strengthen it intellectually and physically. Play will become a definite element in human development throughout the entire course of school training, especially in cities and towns. It will some day be possible to find children of the fifth generation reared in a city.

6. They will give manual training for educational, not economic, reasons, and to all children, especially to younger children, instead of to senior pupils, as at present.

7. They will teach art as the highest form of expression to qualify for clearer interpretation of the artistic ideals of the leaders in human evolution, and to enlarge the expressive power of humanity.

8. The supreme purpose of the schools of the twentieth century will be to develop a strong, self-reliant, self-directing individuality, and to train it by the experiences of school life to become a co-operative element in an interdependent community. The community ideal will dominate all departments of life work in the new century—national, religious, social, industrial, and educational. The greatest educational advance of the early part of the century will be the unity of school and home in the direct as well as the indirect training of the child. All the forces of civilization will co-ordinate around the child. The district school will become a center of uplifting influence, in which will be focused the highest aims of the community, and through which will be revealed the transforming ideal of unity or inner connection, or the interdependence of the brotherhood of man.

WINNERS OF MEN.

BY JAMES H. CANFIELD, PRESIDENT OF OHIO STATE UNIVERSITY.

[STENOGRAPHIC REPORT.]

In these few moments it will be necessary to put assertion in the place of argument, to speak very briefly, and, as usual under such conditions, to speak subject to misunderstanding and misquotation—if quoted at all.

I beg you will understand at the very outset that I yield to no man in recognizing that a keenly developed and a keenly sensitive intellect stands at the very threshold of all successful human activity. The history of the peoples of the earth shows that development of thought-power has been such as to put this last in point of time, though higher than that which has come earlier. First has come that which manifests itself in and through imagination and sentiment. In all literature the history of the race has its first expressions in poetical forms. That has always been followed by oratory—when men of action, men who are determined to secure action on the part of their fellow-men, men full of impassioned fire and fervor, undertake to add to the imagery of poetry that kind of expression that stirs the wills of others and melts them in one grand crucible, out of which shall come, later, superb movement and form.

After this comes prose. As men become more conservative, they become more thoughtful; and so the intellect comes at last into full recognition, into place and power—just as sometimes I think that the brightest stars appear last above the horizon. But the intellect itself, without the stimulus of the imagination, of the emotional side of man; the intellect that seems satisfied with itself and with its own action, that does not go out and find its highest and best expression in and through the exercise of the will—is really of little consequence to the world. It may have a place in the construction of encyclopedias; it may possibly render a service in close and logical argument, in connection with rather mechanical forms of proof, of distinct assertion of premise and conclusion. But after all, that which every nation needs, and that which every nation must have if it is to live, is the intellect not dominated by the imagination, by the emotion; an intellect not subservient to impulse that leads to wild and riotous living; but the intellect which is ever warmed and quickened into new life and into constructive life by these other potent factors in man.

Now we have reached a point in education when we begin to realize the value of this powerful intellect, this keen intellect, this apprehensive intellect, this intellect that can ask questions and answer them, that can select the premise carefully and go quickly and directly to a conclusion that cannot be shaken. But in education, as in all other things, we are only too apt to stop right there. We are apt to forget the other faculties and powers, even to let them fall into disuse—until we already know that they have become weak and indeed are disappearing. The history of nations that have gone into oblivion shows that when the intellectual point has been reached, the other factors or forces being forgotten, dry rot begins, and then comes universal decay. Therefore, I have not, and dare not, put mere thinking, no matter how strong and accurate, as the best and highest type of intellectual or individual development. We need this, it is true, in the great work we have before us. This is a marvelous work. I fancy at times that we only half understand it. In a single sentence, we are to bring into existence that true democracy in which riot and war and strife are things of the past, in which every citizen is a perpetual benediction to every other citizen. In this great work the largest factor is, without question, the public schools. A keen intellect may make a man a leader of his fellow-man in a work like this. It is quite possible for him so to arrange the scheme of movement, so to see the details of the advance and so present these to his fellows, that they will accept his leadership, even though he has not won them to himself. But such leadership is temporary and sure to fail. That there are leaders of men by the score who are never winners of men is certain. But if we are to succeed with the work which we hope to carry to full fruition in the public schools, we must have winners of men.

Of course, winners of men are leaders of men; and in education this is the leadership that we must have. We must have men who are determined to count and to be counted, and for more than one, in the great sum of life. We must have men who are determined to strike twelve every time they possibly can, every time the opportunity offers. We must have men and women who are not content to be human flints that never strike fire, but men and women who propose to strike fire, and to see that the fire is communicated, and that it burns in the hearts of their fellow-men. We need those who will feel that they are in the community, not simply to teach, but to serve, and to serve all interests of the community. We need teachers who will realize that only in this large and generous service are they to find life in any true sense of the word. We need teachers who will understand, and will manifest in their daily lives, that they clearly understand that there is a wide difference between getting a living and getting life—as much difference as there is between earth and God's blue sky. We need men and women who will insist upon having the place that rightfully belongs to them in the community, and who are willing and determined to grow, even though they must endure all the pains of growth. We need men and women who are willing to move forward quietly and humbly, with all due sense of their imperfections; yet who propose to move forward, and who will stand four-square to all the winds that blow. We need men and women who will make themselves felt in the community, as well as simply be known. We need men and women, who when they pass down the street, will carry with them something of that pervasive influence referred to by a friend of mine in a western city, who said, as I pointed out a quick-stepping young fellow: "Why, when that man walks down Main street real estate goes up 15 per cent.!" We need men and women who believe that they can paddle their own educational canoes, and paddle them up stream if necessary. We must have men and women who can stand steady under fire. What a superb courage that demands, and yet how many a forlorn hope has been wrought into glorious victory by that courage! We need men and women who do not fear to express themselves lest they may possibly find themselves without a place; men and women who, because they dare express themselves honestly, intelligently, unselfishly, earnestly, nobly, truthfully, are never out of a place!

The people of this country, my friends, appreciate all this; and the standard by which we are to measure people hereafter is entirely changed from the standard of the past. Heretofore we have been measuring men by what they got out of us. Now we are going to measure them by what we get out of them. From this time on, this principle of giving life that we may get life, this principle that is as old as the teachings of the Master, this principle of large and intelligent service for others—this is to be the principle that is to dominate all American society worthy to be called

American. We need men and women who will walk on the sunny side of the street always; never under a cloud. We need men and women who are never discouraged because they cannot at once put hands upon all that they think they need, that they believe necessary to their work; men and women willing to work with a definite purpose, with long-continued patience, to labor with divine love. I tell you that in spite of all that has been said in the press and everywhere else, upon the street corners, in private and in public, about the American public school, to thousands of people it is still a sealed book and an enigma, and to other thousands it is simply a phrase with which they may conjure and juggle in their own behalf. We must have in the teaching ranks intelligent men and women, who can go into society at large and prove what the public school is, what is its value, what is its power; and by their common sense—the most uncommon of senses—and by their executive ability, by their capacity for organization and administration, by their sincerity and earnestness, by the fact that others see that they never waver in their loyalty, by the steadiness with which they set themselves to their task—bring man after man and section after section of the community into this larger knowledge, this better appreciation of the work that we are doing.

We have large educational revenues today, and we must have these. But we must administer these so wisely and so well that there shall be no reasonable ground of complaint on the part of those who thus liberally transfer to us these great sums from the public treasury. We are able to do much today; but we must be able to do more tomorrow, because we have men and women teaching who can draw around them a larger circle of those who can and will co-operate actively and intelligently in all this great work. Give us something of this power of enthusiasm—this divine madness—which we seem to have lost! Take Germany; see the tendency there to worship mere expert knowledge. Yet I would not decry such knowledge nor attempt to lessen its value. Take France; see the tendency to accept mere brilliancy of intellect and activity of movement. We in America must have all this, but far more. Give us a keener and larger appreciation, each in his own sphere, of the power to dream dreams and to see visions—of the desirability, of the necessity, of this power. Woe to the land and to the people thereof when their prophets prophesy no more and their people no longer see visions! Let us have something of this power, even though it lack what some men foolishly call worldly wisdom. Let us determine to press forward with our work, without perpetually counting the cost. I would to God there were more of us who did not stop so long to count the cost that we never do anything but count the cost!

With a greater enthusiasm, with more bravery and true heroism, than ever before let us take hold of this great problem—the education of the

great common people of America in the common schools of America. This whole country lies open to our hand, the fields are white for the harvest, the door swings wide, the way is broad and clear for all American teachers to become winners of men.

I can only say, in closing, somewhat as one of old addressed the chosen of Israel: Come out from among the stuff, stand head and shoulders above your fellows, be anointed with the holy oil of a divine enthusiasm, work—WORK—with earnestness of purpose and with power; and be crowned as you have a right to be crowned—kingly citizens and citizen kings.

LINES OF GROWTH IN MATURING.

BY RICHARD G. BOONE, PRINCIPAL STATE NORMAL SCHOOL,
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Pestalozzianism may be said to comprise three somewhat distinct, if not altogether new, factors in the teacher's conception of education: (1) that it is a process of development or unfolding, and only incidentally one of acquisition and possession; (2) that it is an ethical process, and means to socialize the individual to the end that all community relations shall be safer and more tender, and (3) that the primary means for initiating and furthering this evolution of the individual is the systematic study of things in the form of what has come to be known as object-lessons for the elementary grades and laboratory science for the higher classes.

Of these three distinctive characteristics of the system the emphasis which it, himself and his associates included, put upon the individual development as above scholarship in education, is pronounced and vital, and places Pestalozzi high among the world's educational leaders. Clearly this was no discovery of Pestalozzi; that is, no exclusive discovery. Others had glimpsed the truth before, as others have done since; some of whom have but vague notions of either the personality of Pestalozzi or the Yoerdun movement. But this forerunner of Froebel and modern teaching saw, as no others of his time saw, the force of the principle requiring immediate touch with things as a stimulus to learning, as a determining law of the school.

With Pestalozzi this contact with nature, and the constant use of it, served as a stimulus, not as that upon which to draw. They were made the means of developing or unfolding the child's powers, and only incidentally of value in themselves. Development, maturing, was the end. The thought is common enough now; poorly comprehended by most

teachers, maybe, but nevertheless persuasive in a way, and reforming. Both the term and the idea haunt pedagogical literatures. We say education is development and teach as if it were storage. Growth is exalted in precept and, in practice, is crowded out of recognition by the supposed claims of the daily life and the dominance of the traditions of the well-informed.

Just what are the outward signs of an inward spiritual growth is not easily determined ; perhaps it is indeterminate.

The modern emphasis put upon development as distinct from scholarship seems to be rather an intuition than distinct knowledge. It is held by faith, not followed by eyesight. It is easier to apprehend education as a process of unfolding, a true development, than to observe and comprehend its successive changes and discriminate its forms and changes.

That poet of nature and of the human heart, Wordsworth, aptly and beautifully phrases the common thought in words not less pedagogical than poetic, as follows :

"So build we up the being that we are :
Thus deeply drinking in the soul of things
We shall be wise perforce. . . .
. . . . Whate'er we see,
Whate'er we feel, by agency direct
Or indirect, shall tend to feed and nurse
Our faculties, shall fix in calmer seats
Of moral strength, and raise to loftier heights
Of love divine, our intellectual soul."

The interpretation of this is not hidden : we shall grow more wise ; shall gain in steadiness of moral strength and rise to loftier heights in the exercise of divine love. But what are the steps in this growth toward wisdom which comes "perforce" to him who "drinks in the soul of things" ? May the unread teacher, or any teacher, recognize the successive levels of "the intellectual soul" ? The vision of details by the poet is not expected ; but to the teacher, as daily guide and lesson-hearer, it is obvious that ignorance of them may be fatal. Life appeared to Froebel to be a "progressive development from lower to higher grades of being." But what are these successive grades here characterized as *lower* and *higher* ? Elsewhere he defines this development as a "perpetual, uninterruptedly continuous, unseparated whole," always "rising from one stage to another."

But, more specifically, he saw that, in addition to increase in bulk or quantity, the idea of development means "an increase in complexity of structure, an improvement in power, in skill, and in variety, in the performance of natural functions." Mr. Bowen, in his biographical commentary on Froebel, summarizes his teachings upon this point by saying

that "increase in bulk will be represented by an increase in the amount of material retained in mind—in the memory; *development* will be a perfecting, so to speak, of the structure of the mind itself, an increase of insight into the connectedness of knowledge, an increase of power and skill and variety in dealing with knowledge, and in putting knowledge to all of its natural uses." Progress in the mass, and in the individual as well, has always been an advance toward clearer perceptions—not necessarily more of them—greater exactness, a more decided marking of limits, and the discarding more and more of what is extraneous. In the individual, education that is development "aims at producing clearness, quickness, and soundness of observation; a mind capable of retaining and readily recalling what it has learned, with power to combine and use what it knows; able to grasp the general ideas and principles which underlie particular cases, rapid and sagacious in drawing inferences, sound and wise in reasoning; full of interest and pride in its work, moved by a sense of what is good and true and beautiful; energetic, honest, strong in purpose, full of kindness." This is most admirable. It is comprehensive of the best things the growing mind covets. It is far removed from simple utility standards. Education on this plane means fullness of life. It is an excellent summary—but at best an unclassified inventory, something like St. Paul's catalogue of the "fruits of the spirit"—suggestive and many-sided, but not typical. It affords a charming description, but is scarcely a guide. As a working programme it would be valueless.

My only contention is, without intending to be controversial or hypercritical, that the doctrine that education is development has the soundness of a creed; we believe in it, but it constitutes no working guide. The conviction, once universal, that education was scholarship, was definite, and might be followed. With this in mind there was no doubt about courses of study, and the objects of education, and school methods. Theoretical pedagogy was simple and easily mastered. There was no need for a science of education. There was no science of education. The pedagogical creed had but one article, and teaching was an art.

But as the body of teachers came to think of and habitually to interpret education as a process of maturing or unfolding, realizing potential functions, and that exercise of faculty is the means of development, the work of the schools was greatly complicated. You will doubtless concede that in all ages and among all peoples the clearest insights of seers and prophets have discovered the same thing. This truth is believed to be more generally held today by teachers and mothers and interested guardians of children than ever before.

Education may be thought of in terms of its instrumentalities; in terms of its products; or in terms of the process involved. Most people

are familiar with its first meaning. They think of it in terms of the apparatus, the furnishings and equipments of the school, for which they have paid or must pay money. It connects itself inseparably with teaching. If education be described as a process, it is far removed from their conception. If it be characterized as taking place naturally, wholly apart from the school, or enveloping and permeating and vitalizing the influences of the school, the idea, in the presence of many well-balanced adult minds, but untechnical and non-professional, becomes hazy and all but unintelligible. And yet this is, in substance, I take it, of the modern conception of education, as a process of maturing. Moreover, we hold the process to be germinative and not architectural; mind grows and unfolds, and is not constructed or built up.

Again, another large class of people, good people as the world goes, think of education in terms of mental or physical possession or attainment. Education means information, or, better still, knowledge or scholarship. Knowing *many* things, one is educated; knowing *much*, in accepted groups of standard subjects, one is scholarly. To persons who are themselves possessed of abundant learning he who has not mastered the traditional curricula of the schools is, therefore, uneducated, whatever else he knows or can do. Faith in the virtues of rich scholastic attainments easily becomes restrictive, and the college-bred man is slow to concede an equivalent training or efficiency from outside school halls.

To another education means skill, resourcefulness, adaptability, successful manipulation, effective execution. One's power to achieve results is the measure of his education. To be effective in public influence, successful in business, possessed of mechanical skill and ingenuity; to have pleased the public taste with well-written books; to paint, to carve, or do battle, or legislate with insight and wisdom; to explore, to discover or invent—are tangible marks of real education. What leaves these out cannot be real education. All else may be omitted, and the man still be educated.

In the judgment of a third class, of growing numbers, too, education connects soundness of character, integrity of life and profession, honesty, purity of motive, intended and habitual straightforwardness. For the accomplishment of these are all tasks and exercises. He is well educated who has learned to be good, to live unselfishly, and to realize the common virtues in his daily walk.

Here are four somewhat distinct views of education. Three of them regard education as a result, as something to be possessed; and one, the means or instruments employed for working out this result. But in the conception of education as development these means and products are only incidents, or more or less certain accompaniments. The cardinal fact is the maturing process. It is this upon which current emphasis

seems to be converging. Whatever may be the practice in the school-room, this seems to be the theory: that education is a change that takes place in mind, rather than any coveted result of such change.

Information, skill, discipline, character, are mental products. So are a genial temper, a chastened will, seriousness, sincerity, and patience. The teacher will have these things in mind in the process that is here called education. The conviction is all but universal that the process that does not result in giving some sort of needed power, or discipline, or skill, or other efficiency, is a waste of one's years. In most minds education is connected with these qualities. They are the outward marks of an inward change. But the inward change is more fundamental than any specific power, or discipline, or skill, or efficiency. It ought not to need saying, perhaps does not, that it is of far less moment what a child knows than how and with what spirit he knows, the projective, forward-looking interest that masters him.

Gathering up the threads of what has been said in the preceding pages, mind would seem to grow or mature in the following distinct ways:

First: It is obvious that while an increase in the number of experiences may not be the highest form of mental growth, as it is not all, it constitutes one very important factor. Not only does the adult, if he be mentally grown or developed, have a larger store of judgments and insights, a greater aggregate of opinions, joys, pleasures, pains, satisfactions, and interests than the child; but for any given moment his experience seems to be richer. This cumulative tendency of the mind—thrifty and curious advance agent of the soul—lies at the foundation of all scholarship. No education is satisfactory that does not assure one of a reasonably large and definite accumulation of significant group facts. One difference of note between the two educations called the *new* and the *old* takes its rise here. The one said, Learn facts, and the more of them the better. To the other, facts are seen to have value for the mind only as they type facts—significant of a class. Froebel said to teachers, "Plant mother thoughts"—thoughts that multiply themselves into a line of descendants. A thing to be worth either teaching or learning is one that easily and naturally gathers other things about it and relates them to it. The one theory differs from the other, therefore, not in saying, Minify scholarship or neglect information; but in standing for the selection of such matter as may be called representative, centripetal, and organizing.

But education has to do with not only increasing the aggregate of experience, but a growing complexity of the operations of the mind. Where there is a healthy process of maturing, remembrance gives place to, or is supplemented by, recollection—percepts by concepts, present and transient interests by distinct and vital ones. And the principle will at

once be recognized as the subjective ground for a course of study, and the gradation of schools, the distribution of lesson matter, and the form and sequence of questions. It is a commonplace thought, but more far-reaching in its consequences, and more conditioning as a principle of teaching than the young teacher is ready to allow. All the stages of life are upon successively higher planes, in this respect the law of the moral life being exactly the same as that of the intellectual life. We are all more or less prone to forget this, or else have never learned that, in the entire life of the child, the law of increasing complexity holds good. His pleasures and sorrows, his interest in nature and people, his occupations and games and leisure, his love of the beautiful, his fears and hates and standards of conduct, his sense of personal rights and unselfish interest in others—must be measured and interpreted by the same law of an increasing mastery over complex problems of mind and heart.

A third way in which the maturing of mind manifests itself is in the greater accuracy of its movements and the clearer definition of its images. Sharp, clear-cut discriminations, well-defined pleasures and satisfactions, unquestioned choices and purposes, distinct perceptions, a conscious and intended bias of mind and heart—these belong to maturity, not to childhood. In the process of maturing all processes become better defined. There is a growing accuracy of mind, a definiteness and precision and positiveness of boundary in feelings and thoughts and motives. It is an entirely natural process, but may be greatly furthered by the school or by any wise direction. Hold the child responsible for all the accuracy of function and clearness of vision which his experience justifies. Be sure that his words are the legitimate prompting of his understanding. Keep him up to his best.

One of the most dangerous forms of leniency, the unkindest form of intended kindness, is that which allows a child to become addicted to uncouth and disorderly thinking upon any affairs. Dawdling means slow suicide for both mind and heart. Sharp, clear-cut, purposed living upon high planes is the ideal.

A fourth form of improvement in human maturing is in the increased control over one's actions and the relatively less of life that is given over to spontaneous or impulsive doing.

Either the power or the habit of deliberate action, as taking the place of haste; taking time to consider; planning, experimenting, adjusting means to ends in some intelligent way; all revision of experience in however simple form; restraining one's feelings or behavior to accomplish coveted personal ends; bearing disappointment and loss; honorable conduct in the presence of temptation to crookedness—as concrete cases may be, separately and collectively, unimportant in themselves; but as means of working a rational self-mastery, or, what is better, as signs of

control and a habit of considerateness already attained—such experiences are invaluable.

In a greater or less degree every one of them may be found exemplified in the conduct of every normally maturing child in every grade throughout the school. The teacher is interested to know the fact, and to be able in a sure way to recognize the more or less visible signs of this growing control. Her foresight must plan occasions for his exercise of choice and self-guidance, and the realizing of preferences, and the purposed handling of instruments of expression; and, best of all, frequent opportunities for creative work. To grow in self-direction there must be frequent exercise of the power, purposed, continuous, and fitted to child experience, always inviting to greater effort.

No system of education is worth much, whatever its other merits, that fails to do this in some degree for every child. To be dependent upon others, to be easily led, to show temper in trivial matters, to live in, and be satisfied with, the passing day, contradicts whatever claims may be made for education. But this control, if it be real, touches all the life, and every instant. Every intellectual function, and bodily skill, the emotions, occupations, amusements, come gradually, and in time, under the law of purpose and intelligent direction—self-direction.

Among the several forms under which mental growth appears none is more commonly recognized, or generally well understood, I suspect, than what may be termed facility—the ease with which the mind performs its accustomed acts, and the readiness with which it takes up with the new and the more difficult. One purpose of all training is to mechanize right-doing of every sort. What once was done with effort only is now easily done. The purposed achievement that required attention is repeated or used unthinkingly, and well used. There is no loss of effectiveness, and there remains the power to make every unconscious, or automatic, action conscious and regulated as occasion demands. Promptness of judgment, quickness of perception, readiness in forming one's images, a facile recollection, cheerful sacrifices, generous unselfishness, spontaneous, hearty joy in one's pleasures, are signs of a healthy maturity, as much to be coveted as it is unusual. These would seem to be legitimate aims to be kept before all classes by all teachers. No exercise of the intellect or the heart whose much repetition leaves it unfamiliar and difficult has done its perfect work. Voluntarily to choose an act as right and do it cheerfully shows a high degree of goodness. There is no virtue in the mere struggle to avoid being bad. If there be a struggle, the virtue consists in having ended it, once and for all, so that future rectitude is easy. Facility is to be coveted in every wholesome exercise.

In no respect does the educated adult differ more widely or more fundamentally from the untrained child than in the growing recognition

of the moral quality in actions, and the disposition to regulate one's conduct in terms of its standards. To the child few things are either right or wrong. Actions are merely indifferent. Soon it is the majority of actions that are indifferent. Every day revises the classification. The line of division, for the average individual, gradually encroaches upon the group of indifferent actions, and naturally. The field of recognized moral interests enlarges. The moral quality is seen to inhere in an increasing number of one's experiences. What yesterday was regarded as purely impersonal and neutral presents itself today as having ethical bearings and involving responsibility. But recently the youth did unthinkingly and habitually what he comes to perform with misgivings or refrain from doing altogether. The moral sense is developing.

Primarily the child—the young child—does as right what pleases himself; later the standard is what pleases others, that is, some others—his parents or teachers, or others in authority over him. In time he comes to be guided by the real or supposed utilities in behavior; he regards as right those actions that pay, *i. e.*, that yield him some advantage in a personal or social or economic way. In the beginning he values some present advantage, for which, upon occasion, he substitutes a distant, but more inviting good. Still further, in place of this standard of utility, he comes to regulate his conduct by the standards of those about him. Public opinion is his all-sufficient guide. He does as others do, and counts as safe what others approve. To this is added in time a recognition of some things as right and having authority because of the race's experience; their test in many lands at different times, their widespread use and final approval. History, literature, art, invention, government, ethics, religion, industry, are full of such lessons.

These may be called the elementary stages in the process of moralizing life. Each stage has some advantage over the preceding. From doing as pleases one to have submitted to recognized authorities; to have replaced obedience to external control by a judgment from within; to be again corrected by the larger estimates of public opinion, and in time by the net results of the race's best insights—is a somewhat gradual but sure progression along an ascending scale. The child has gained at every step. More and more life everywhere takes on the moral quality, and few indifferent actions remain. The field of responsibility has greatly extended; and if, along with the recognition of this universally moral aspect of the world, there goes a disposition to measure one's conduct by the revised standards, education would seem to be doing her perfect work.

Along with this moralizing of life, an incident of it, and re-enforcing it, is the process by which the individual is socialized. That is, one form of growth that belongs to education is the more intelligent consciousness

of the individual that he is one of many, sharing common interests and mutual limitations. The child loves society, but is imperfectly fitted for living in it. Life for him is centripetal and exacting. Things, and other people, exist for him. They are meant to come his way and serve his want. He must learn, as he will learn, to be co-operative and self-forgetting. He comes to do for others as others have done for him; or rather, he comes to act with others for the common good. He sees the increasing richness of the life that accompanies this union with others, combining into institutions, and the more transient local organizations, and that can cheerfully, and does habitually, subordinate itself to the general welfare, and measures its privileges by its duties. Education that leaves out this form of improvement is growth in a partial and narrow sense only. It is insular and disintegrating.

The problem of school education is twofold. How to fit the individual for the larger and most fruitful inner and personal life finds its complement in the question of how to introduce him to a high and conscious participation in the results of the race's culture, in the form of science, art, religion, ethics, philosophy, invention, the social police, and intellectual commerce. The process is a natural one. The schools can only help it on. But the schools cannot afford to be found not helping it on. To this end are made to contribute not only the games and concert of the little folk, but the lessons in history and story, the economic aspects of studies, the class constitution of the school, and whatever reasonable regulations grow out of the massing of children into groups and schools. No claim upon the teacher has more far-reaching consequences for either the child or the community than this—that instruction shall have in mind the increasingly complex social life he must live, and consider how best to fit every child for it.

Finally, the process of education as growth appears in what is well characterized as solidarity of mind. By a process of integration the many-colored manifold of one's experience is woven into one pattern. The lights and shadows of life—joy and sadness, fortune and misfortune—take their respective places in the general design. But it is one design. The tendency is to make the life one and organic. This is the ideal with the teacher for every child. In the perfect life, what the heart prompts and mind approves is one. Then an active memory shall no longer be a menace to the judgment. Precedent shall re-enforce the understanding. Duty and pleasure shall have become allies when the highest self-interest is found to coincide with the common good, and duty and privilege are seen to be equivalents.

This solidarity of mind is (1 and primarily), a massing of one's experience, and (2) the converging and co-operation of one's powers, the whole mind functioning as a unit. The former calls for correlation of

studies, that the act of instruction shall help on the tendency toward integration; the latter requires alertness and a rich and inviting environment.

Child experience is multiform, but not manifold. One should rather speak of his experiences; education is to convert them into experience. In childhood they are numerous, but shifting, without fixed connections, fluid. The process of maturing is a process of organizing these discrete experiences into an individual whole, giving it the quality of the body of knowledge.

Thinking and feeling, consciously in the adult, as spontaneously in the child, come, easily and surely, to find their issue in doing. They are no longer two functions, nor yet two sides of the same function; but rather two stages or orders of the mind's acting. In a like manner, understanding and expression, and purpose and expression, correspond and supplement each other. To wish my friend a good is to do him good to the extent of my ability. Experience tends to round itself out. Processes re-enforce each other. A reliable memory makes judgments safe. A controlled imagination expands the field of the understanding. Refined feelings make one sensitive to impressions and multiply perceptions. One's purposes are clearer and more positive if grounded upon accurate knowledge and given direction under the influence of an abiding interest. Motives are refined as life is broadened and the heart is touched.

By all of which discussion is meant simply that one aspect of education is this integration of experience and the concert of faculties. Growth of mind appears in its increasing solidarity. It becomes more consistent with itself. Contradiction between precept and practice becomes less frequent. Learning and efficiency are more often found united; learning and virtue are seen to be of kin. Along with a sound mind in a sound body is implied a pure heart as justifying both; and an education that does not aim to accomplish something of this for every child has not even begun aright. School education, not less than the preaching of the pulpit, must seek a wholeness of life that is the first atonement. Scrappiness of learning will not accomplish this. *Much* learning, in the sense of knowing many things, is deceptive and often cruel. What is learned without in some way being lived is vain or hindering. Culture, to be a spiritual force, must permeate the whole life; so of goodness, a sense of the beautiful, one's habit of industry, the forms of courtesy. To be kind to one's equal, but not to one's servant; to be diligent in business and neglect one's home; to exalt the beautiful in dress and furnishing, and be indifferent to it in one's manner and habit; to be good when convenient or when it is easy, and to be cross in adversity—is neither courtesy, nor industry, nor refinement, nor goodness, but only their semblance. It is this identification of learning with

life that must save education, if it be saved, from the charge and blight of formalism.

Besides an increase in the number of accurate mental pictures, and an increase in the accuracy, control, and facility of the mental process, and the mastery of successively more difficult and intricate operations, directed growth seeks the cultivation of a rich and constructive foresight and the twofold process of moralizing and socializing the individual, to the end that the whole life be perfected and mankind be improved.

HIGHER EDUCATION IN THE SOUTH.

BY GEORGE T. WINSTON, PRESIDENT OF THE UNIVERSITY OF TEXAS.

The highest expression of a people's life is found in its instrumentalities of education. For two hundred years the life of the southern people, rural in occupation and semi-patriarchal in character, was marked by the highest development of individualism and by lack of community organization. The mass of the people were educated, not by schools, newspapers, and lyceums, but by churches, courthouses, and political discussions. It was a church-going people, among whom habitual absence from worship, or inability to follow the preacher through the endless divisions and subdivisions of his historico-metaphysical discourse, was accounted a mark of inferior, if not defective, understanding. The preacher was the scholar of every community, and usually conducted a select school, wherein mathematics, Latin, and the hickory switch constituted a strong trivium of culture.

What the newspaper and the lyceum were to the North the courthouse and the hustings were to the South. To the county courthouse came, at least six times a year, every able-bodied citizen. Here was a forum for the display of the best learning in the community, whether legal, historical, or scientific. Here titles to property were transferred, and issues of life settled by descriptions of the Trojan war, the death of Socrates, or the downfall of the Roman empire. Great speeches were talked over, memorized, and handed down from father to son; each generation came in turn to hear, in the county courthouse, the best thought, the largest learning, and the noblest aspirations of its greatest leaders. Political campaigns were less frequent, but equally efficient, as popular educators. It would have been difficult to find a voter in the Old South who had not listened to political discussions from noon until night. The amount of popular intelligence on political subjects would scarcely be credited by one who had not witnessed it through personal

contact. Men who could neither read nor write were familiarized, through political discussions, with the best thought of the continent, and frequently quoted, not merely the ideas, but the very language employed by Marshall in legal opinions, or by Webster in forensic debate.

Among such a people higher education was mainly an instrument for the training of leaders. The southern college reflected the life around it. It existed, not in response to a demand for popular education, but in response to a demand for leaders in political, social, and professional life. Its foremost students were learned and scholarly, but the college world, like the outside world, esteemed scholarship less highly than character. The southern college, therefore, was a nursery rather of manhood and character than of learning and scholarship. To be faithful in friendship, to be truthful, generous, and courageous, to keep one's honor in return for confidence bestowed by teacher or fellow-student, to make an honest failure rather than dishonest success—these were the standards most esteemed in the higher education of the Old South. They may all be summed up in the single phrase, "To be a gentleman." This ideal had its cheap side in artificial class distinctions, social gewgaws, and undue emphasis on dress and manners; but its sterling worth and genuine power were manifested in the purity and happiness of social and domestic life, and in public lives, unsullied by love of lucre, and free from scandal; in the incorruptible integrity of southern statesmen, who molded the destinies of this nation in the agonies of birth, and guided them afterwards for half a century. Its loftiest expression was made by Henry Clay, who said, "I'd rather be right than be president." Its highest manifestation was in the life and character of Washington, who will remain forever the finest type of humanity, nobly illustrating the superiority of character over intellect.

It cannot be denied that colleges and universities in the southern states have failed to keep pace with the progress of education, either in America or in Europe. The reasons for this are not far to seek. In addition to one already suggested, namely, the emphasis of character culture above mental culture, there is another, which goes directly to the root of the matter and explains, not only the collapse of higher education in the southern states immediately following the war, but also its revival since, upon a stronger foundation, and its rapid development in harmony with the educational system of the country.

It is a notable fact that the earliest attempts at higher education in the South were made through institutions supported by public taxation, or endowed by public grants. It is notable also that they were organized with plans of instruction, and equipped with instructors representing the best ideas and the best learning of their time. But they lacked the vital

principle which gives power of growth to every living organism; they were not a natural evolution, growing out of and founded upon lower schools for popular education, but were an artifice creation, demanded for a special purpose by a special class. They did not rest upon the confidence and patronage of the Great People; they were not fed by public schools, and did not grow, for lack of food to grow on.

The southern universities were dependent upon a small, dominant class for their maintenance and development; and the overthrow of this class by the fortunes of war destroyed at one blow the southern institutions for higher education.

With the establishment of public-school systems in all the southern states there has come a new conception of higher education, and a stronger basis for its support and development. Two generations have now been educated in the public schools of the South, and are demanding higher education. They are making a genuine demand, which is echoed in every public school and heard in the halls of legislation, and will not be satisfied until at least every larger state is provided with one thoroughly equipped state university.

The hope of higher education in the South depends upon the state universities, and the hope of state universities is based upon the development of public schools. The southern universities are rapidly fulfilling this hope, in the face of continued opposition and threatening dangers. The South is undergoing a social, political, and industrial upheaval as great as an earthquake. The people are feeling their power, and manifesting it in every direction. In South Carolina the leaders of the revolution have almost destroyed a well-equipped state university in their zeal to build up so-called colleges for the people. In that state, once famous for culture and learning, the penalty is now being paid for higher education separated by a broad chasm from the life of the people. A noble university, resting, not upon the foundation of public schools and popular desire, but upon the needs of a small class favored by birth or fortune, was swept from its foundations by one political storm. A like fate has threatened every southern university. Political destruction, or political control of state universities, is today the most serious obstacle that confronts higher education in the South; but the danger is only temporary. Such folly cannot triumph, nor long endure. A single experiment will prove conclusive. In North Carolina, during the period of reconstruction, the state university was turned over to the political spoilsmen. A brief experience of three years taught a lesson that will last a century. The doors of the university were closed, its halls were deserted, its campus was grown up with weeds. Twenty years ago it began a new life, placing itself at the head of the movement for public education, and already it has surpassed its former illustrious record, and is rapidly becoming estab-

lished in the affections of the people. In the recent legislature democrats, populists, and republicans united to increase its endowment, and enlarge its curriculum.

Wherever a southern university realizes the necessity and the value of popular education, and uses its power to guide, inspire, and strengthen the public schools, it is growing as an institution for higher learning. Higher education must rest upon lower, and both must be evolved from the life of the people. The southern universities are realizing this mission, and are struggling to perform it. They are centers of the strongest forces that are producing the life of the New South; they are becoming the head and heart of public education; the impulse for the scientific study of history, politics, government, finance, and sociology; the inspiration and the guarantee for freedom of opinion in all things. They lack endowment and equipment; but, as they grow in usefulness, they will grow in public esteem, and will receive ample endowment from public grants and private philanthropy.

But their new life and growth are steadily resisted by educational forces of great power. The Protestant denominational college in almost every southern state has opposed the building up of state universities. In North Carolina two college presidents, both ministers of the gospel, leaving their college duties, lobbied in the state capitol and addressed arguments before committees of the legislature to prevent the maintenance of the state university. The largest body of Christians in that state, for three successive years, formally assembled in religious convention, demanded that the state cease to support its university, its normal school, its agricultural and mechanical college, and thus retire from the field of higher education in favor of the churches. The same battle has been fought, or will be fought, with more or less violence in every southern state. No one can doubt the issue. It is a fight against the fundamental principle underlying American institutions—a principle which recognizes the power of every community, whether it be state, county, or city, to draw upon all the wealth and all the forces that it has produced, for furnishing every child in its borders with a complete education. It is the old fight of the Jesuit against public schools; the old fight of ecclesiastical authority against popular government. Such an issue can find but one answer from the American people.

Not every denominational college is making this fight. Many are in sympathy with public schools, and are nobly assisting the state universities, recognizing their own limitations, and, especially, the impossibility of their becoming organic factors in public education while remaining under ecclesiastical control. The average church college in the southern states is contributing to the advancement of higher education by creating a desire for mental culture among large classes of peo-

ple who are mainly controlled by religious agencies ; and the best of them are elevating their standards of scholarship and pursuing lofty ideals. There is little reason, however, to hope for considerable expansion, extension, or improvement of higher education through their instrumentality. Their endowments are small, without hope of early or large increase ; their equipment is inadequate ; the selection of their faculties is circumscribed ; and they cannot come into organic union with the public schools. The hope of future development lies in state universities, and in such church colleges as may be enabled, like Harvard, Yale, and Columbia, by private munificence and public support to outgrow their ecclesiastical environment, and become genuine American universities. It is a noteworthy fact that every college or university in the southern states whose life goes back beyond the present century, excepting the Roman Catholic college in Georgetown, was either non-denominational in its origin or has since put aside its denominational character.

The genius of the American people and the free spirit of their institutions are unfavorable to organized ecclesiastical control of their educational, social, political, or industrial life. The community alone can act for the common welfare. It only has the power, the perpetuity, the responsibility to public sentiment, and the argument of public necessity.

The South is learning the lesson of community power, and is using it to secure for the community all the blessings which government can afford. Its theory of government for two hundred years has rested upon the basis of individualism. It has taught the doctrine of individual effort, individual power, individual achievement. In pursuance of this ideal it has produced the highest types of individual manhood. But modern life demands organization. Its variety, its complexity, its intensity, and its magnitude are too great for control by individual power. The forces that govern it must be the organized forces that compose it. Government can no longer be administered by the few, however strong in character, intellect, and power. Government is become a combination of the people, wherein each individual is a responsible unit. The watchword of the century is organization, the organic union of all forces that make for a common purpose.

Germany spoke it when, organizing her intellectual forces into a great system of education and her physical forces into a splendid army, she wrested from France the German provinces, and stood erect among the nations of the earth, one united fatherland. England speaks it daily in her organization of the banking, the trade, and the commerce of the world. America spoke it upon the field of Gettysburg, where was established forever the organic union of all the forces upon this continent that make for human progress.

The South is learning the lesson of organization ; she is learning that

communities are greater than individuals; she is learning that that government is not the best which does the least, but that which does the most, compatible with individual effort and individual liberty. The New South is the South of organization. It is organizing to secure better instrumentalities for the development of its material resources, better means of production, better facilities for transportation, better markets for its products. It is organizing, especially, to secure better systems of public education. Year by year it has increased the tax rate for the support of public schools, resolutely facing the problem, not only of its own education, but the still greater problem, the greatest that ever confronted a people, the problem of educating and developing the negro. She does not shrink from its solution. For two centuries she carried in her arms the negro slave; for two centuries more she will carry upon her back the negro freeman.

The progress of higher education in the South, and the hope of still greater development, may be seen most clearly in Texas. Sixteen years ago Texas had 3 graded schools, it now has 930; it then had not one public high school, it now has 468; it then employed less than 5,000 teachers, it now employs over 14,000; it then spent less than \$1,000,000, it now spends over \$4,000,000; it then enrolled less than 200,000 pupils, it now enrolls more than 700,000; it then conducted 7 summer normal schools, with an attendance of 451 teachers, it now conducts 75 normals, with an attendance of nearly 4,000. There are 60 public high schools in Texas, preparing pupils for the university, and 400 others will soon reach the same standard. The Houston High School is preparing students for Harvard University. Its instruction is superior, in most respects, to that offered by our best universities fifty years ago. Its enrollment includes one-seventh of the entire school population. The best thought, the best energy, and the best ambition of the continent are working to build up these schools. The Waco schools employ teachers representing twenty-seven states of the Union, and over thirty colleges and universities.

The University of Texas is only thirteen years old, but its faculty includes forty-seven teachers, representing the culture of twenty-three American and European universities. Its enrollment of students is 752; its endowment 2,000,000 acres of public land and \$650,000 of bonds. The recent legislature increased the appropriations for the maintenance and equipment of every state institution for higher education, and gave 50,000 acres of public land as a nucleus for a negro university.

Texas invites her daughters, as well as her sons, to all her opportunities for culture. They come gladly, not in a spirit of unhappy restlessness nor of discontent with nature's decree of sex, but with resolute determination to fit themselves, by larger culture, for the completer realization of woman's mission in life. They cling to the ideal of domestic

and maternal duty. They cultivate the heart more than the mind, relying upon its guidance in the gravest problems of life. When mind whispers, "Why cling to unhappy marriage?" heart replies, "I love my children more than myself." When mind suggests, "Why cling to religion that you cannot prove?" heart replies, "Religion is true for me that gives me comfort and joy." When mind says, "Demand the ballot and have a voice in government," heart replies, "I will not vote, because I will not fight to enforce the ballot."

Wonderful progress in education has been made during the last sixteen years in Texas, but it is only a beginning. Texas is the youngest of the southern states, but the greatest in resources, in population, and in desire for progress. Her territory is almost as large as England and Germany; is larger than the thirteen original states excepting Georgia. Her size, her position, her fertile soil, her genial climate and inexhaustible resources, easily mark her as the empire state of the South. She is destined to be upon the Gulf what New York is on the Atlantic, Illinois on the lakes, and Washington or California on the Pacific. She is the great depot between North and South America.

Great are the resources of Texas, but not greater than her people. A mighty stream of manhood is pouring into Texas from all the states of the Union and all the nations of the earth, forming a people strong in character, vigorous in intellect, broad in sympathy, resolute in purpose, and progressive in methods. Here the idea of education as the supreme function and duty of government was born with the state itself. Sixty-one years ago a handful of heroes declared the independence of Texas, charging it as a crime against Mexico and ground for revolution that it had failed to establish any system of public schools.

Texas is a southern state edited by Yankees and foreigners. Here the New South nurtures the Old in lessons of thrift, energy, enterprise, and public progress; here the Old South nurtures the New in the old-time virtues of modesty, unselfishness, honesty, friendship, and hospitality.

The South is adopting new instrumentalities of culture, but is not rejecting the old. With larger plans and fuller equipment she is cultivating intellect, but she still believes that character is greater. In her colleges and universities there is a steady effort to increase knowledge, to elevate scholarship, to inspire enthusiasm for learning, and to improve methods of culture; but each and all of these are still esteemed mainly as instrumentalities for the making of a perfect manhood. As the highest expression of a people's life is found in its universities, so the southern university, resting upon the new foundation of public schools and popular support, blending the old ideal of individual manhood with the new ideal of universal education, will represent the stronger and broader life of the southern people—a people which has given to humanity Washington

and Jackson, Jefferson and Marshall, Lee and Farragut ; a people which, by heroism in war, by fortitude in humiliation and defeat, by the resolute maintenance of high standards of honor amid the temptations of poverty, and by quick adaptation to new and rapidly changing conditions of life, has shown itself to possess the 'strongest qualities of manhood, and to be capable of the highest moral, physical, and intellectual culture.

THE DEMOCRACY OF LEARNING.

BY THE REV. LYMAN ABBOTT, EDITOR-IN-CHIEF OF "THE OUTLOOK" AND
PASTOR OF PLYMOUTH CHURCH, BROOKLYN, N. Y.

[STENOGRAPHIC REPORT.]^{*}

This great assemblage is itself a witness to the significance of the topic announced, an assemblage which would have been impossible in any other epoch of the world's history, and would be impossible today in any other country than America. Other lands may possess older universities and may claim more excellent ones, but only in democratic America would it be possible to gather 8,000 or 10,000 instructors, engaged in the work of giving education to 16,000,000 children of the common people.

There seems a certain impropriety in my venturing to address such an assemblage as this, containing the most renowned and most expert educators in the country, if not in the world. I can bring no expert knowledge ; I cannot discuss school methods. It would be a supreme piece of egotism for me to assume to do so. But it may be worth your while to take a little of your valuable time to consider some of the fundamental principles which underlie this great, vital movement which you are carrying out, as they are seen by one who speaks for the parents, for the children, for the common people. And it seems to me that sometimes it is well that we should pause in a great movement like this, which we must believe has large and divine significance, and consider its foundation, its animating spirit, and its ultimate ends.

We have entered in this country upon a sublime and even awful experiment. We have here 60,000,000 people, soon to become 100,000,000, without any common traditions, any common religious belief, any common race connection, any common language or literature, any government or authority over them, any trained aristocracy to lead them. We have gathered here to try an experiment never before tried in the history of

^{*} It is a matter of regret that only a partial report of this excellent address was obtained. Dr. Abbott spoke without manuscript, and the official stenographer of the association was accidentally absent. The report herewith presented is copied from the Milwaukee *Sentinel* of July 9, 1897. — Ed.]

the world, and certainly not on any considerable scale. Aristotle said governments were divided into three classes—government by the one, government by the few, and government by the many. We have added a fourth: government by all—self-government.

The foundation principle of our institutions is, first, that every man shall govern himself, and that in all those matters in which his own interests are predominant he shall not be ruled by any man, even though he be better than himself. The state regulates these things which belong to their common interest, and the whole nation takes up so much as is left, that is, only those things which do not concern the individual exclusively, but do concern the entire body of the citizens in the nation. This is our experiment—government by the people, self-government. And we are not so crazy in America as to believe that an ignorant and immoral man is competent to govern himself, or an immoral community to govern itself. We hold in America to the doctrine of self-government, but we hold, as the basis of self-government, self-education, and as we will have no one to rule over us and determine what our laws shall be, so we will have no one to educate us and determine what our education shall be. Our self-government rests on our self-education. This is the foundation of our public-school system. We will not give it to private enterprise, we will not trust it to the hands of an individual, though we desire the co-operation of the individual parent. We will not trust it to the church. We have tried education at the hands of the church, the Roman Catholic church in Europe and the Protestant church in the New England states, and it has not accomplished what we desired. We have resolved in America upon self-government, resting on self-education, and we are in this land teaching ourselves, as we are governing ourselves.

Now, whether this experiment is wise or not I am not here to discuss. Wise or unwise, we have entered upon it, and we are going on until it is a sublime success or a stupendous failure. It is idle for Carlyle or Ruskin to summon us back to feudalism. It is idle for Professor Peck, of Columbia University, to say that the only good governments have been aristocratic governments, and that we must limit the education of the common people and provide education for the aristocratic class. Whether the system is wise or unwise, we are going on with it. For my own part, I believe in its success. I am a democrat from the crown of my head to the soul of my feet. My democracy is not political. It is a religious faith. I believe in God, because I believe in man as God's son, and in man because he is God's son; not in black or white, good or bad, German or English, ecclesiastical or non-ecclesiastical men, but in men as men.

We are going on to try this experiment. And our standard of education is fixed for us by the end to be achieved by public education. If we try an experiment of self-education as a basis for self-government, then

everything which is necessary to make good citizenship is to be a part of our school curriculum. If the state has a right to educate at all, it has a right to educate in all the elements of character that are necessary to good citizenship. I do not say that it may not do more: I cannot enter into the disputed question of state universities; I simply affirm that, if our popular government rests on popular education, then our education must include all the elements of life that are necessary to make good citizens.

The good citizen must be able to understand his fellow-citizen. He may learn German or Polish, but he must learn to understand the English language. He must know how to express himself to his fellow-citizens. He must be able to speak and to write the English language. He must know the world he lives in, and especially his own country. He must understand something of geography. He must know the experiments of the past, lest he repeat the blunders of the past. He must know something of history. He must know the great thoughts of the great thinkers. He must find his leaders in the great thinkers of the past, whose thoughts make literature. He must learn enough of science to be able at least to earn his own bread. These are essentials to good citizenship; but these are not all. He must not only know how to think, he must also know how to do. He must be trained in the use of the motive powers, as well as informed in the facts of the past and the present. The good citizen is to learn first of all how to govern himself; then he is to learn how to co-operate with other men and to exercise a will over other men. For this purpose the motive powers must be trained and educated, as well as the intellectual powers, or this man will not be a good citizen.

If the state has a right to educate the man for good citizenship, then it has a right to teach him in all that part of morality and religion which is essential to good citizenship.

We are educating men and women to be citizens, to take part in the government. What is the function of government? It is, first, to administer justice. This great population of 60,000,000 people must know what justice is, or it cannot elect legislators to form laws, or judges to interpret them. It must, in the second place, know how to administer reform. More and more our penal systems are becoming reform systems. We are taking the boys from the gutters and streets in the name of the people. The people who are to elect the jailers and wardens must understand what reformation is, or they cannot administer that function of the government. We must know the duties of this nation towards other nations. In the last analysis this people must know what ought to be done when the harrow of war is burying under the sod thousands of men in Cuba, and when the Armenian massacre goes on. It must know—not merely president, congressman, consul, ambassador—this 60,000,000 people

must know what is our duty to other peoples. Our people must know what is their duty towards one another. They must know how to decide the great economic questions presented to them. Last fall the country was agitated from center to circumference over the question of honest money. The free-silver man, the gold man, and the bimetallist thought he had the future of the country best at heart. They differed widely, but in one respect they agreed: we must have honest money. If the people are to determine this question, they must know what honesty is as applied to currency. They must not only know; they must have a will and desire to do the honest thing. It is not enough that the people know how to read and write and cipher; it is not enough that they know the boundaries of their state; it is not enough that they know the history of the past; they must know and appreciate the eternal laws of right and wrong.

If the state has any right to educate at all, if it has a right to carry on this great, wonderful experiment of self-government, it has a right to educate in those elements of moral life which are the foundation of self-government. But we have been in such a panic lest religion should creep into our schools that we have put clauses in our statutes and constitutions against it, and have arrayed judges at the door to keep it out. We have agreed that we may learn the language and literature and history of every other people, but we must learn nothing of the language or the literature or the history of the Hebrew people. We may study the laws of Solon, but we must not study the laws of Moses. All other literature, all other history, all other laws our teachers may use, but not the history of the institutions and laws and literature which come most closely home to us. It is true that these laws concern us more than the laws of the Greeks or Romans; it is true that this race instituted popular suffrage; that it was the first race that maintained no standing army; that it was the first to make provision for the education of all the people; that it was the first to form separate states into one nation, and to whose schools we can trace ours as we can trace the oak to the acorn. We must not study of Gideon and his brave three hundred. Why? Because we must not study religion? Not at all. We may study religion as much as we please—the religion of Greece, or Rome, or India, or China. It is only the religion of the Hebrews which we must not study. What is there, then, in that religion, of which we stand in such dread? “He that hath clean hands and a pure heart” is religious, saith the psalmist. I do not think that if the aldermen of Chicago had learned that religion in the public schools, it would have injured them. To do justly, love mercy, and walk humbly with God is religion, saith the prophet. Justice, mercy, humility—that is the Hebrew religion. Is there any danger in that? With 200 lynchings in the past year, where is the danger of overdoing justice? Are we so lowly,

so self-depreciatory, and so insignificant in our own vision, that we need be afraid of teaching our children what humility means?

I do not plead here for public worship in the public schools. On the contrary, I vote against it. It is not the function of the state to provide public worship, and in any community in which there is objection to public worship in the public school the objection should be sustained and the worship discontinued. I am not pleading for the reading of the Bible in the public schools. I want no perfunctory reading of the Bible in the schools. I am not pleading for theological tenets of any kind; for theology, however important, is not essential to good citizenship. No Roman Catholic will say that the Protestant does not make a good citizen, or *vice versa*. It is not theology that I am pleading for. Theology is not religion. It is not that kind of teaching which sets the child to examining himself and considering the cause of moral action, and makes him a philosopher before his time. I am not pleading for the Bible as an authority in the public schools. What I am pleading for is this: that if the state has the right to provide self-education, it has the right to provide all the elements necessary to train the children in justice, mercy, purity, goodness, faith, hope, and love; to understand how they stand related to one another, and to see the great laws that underlie all the universe; to see behind this panorama, what Herbert Spencer has seen, that we are ever in the presence of an eternal energy.

To sum all up in a single sentence: The right of the state to maintain a system of public education is the right of a self-governing community to provide for the education of its own governors, that is, of all the people; this is a right, and a duty, to educate in all the elements necessary to good citizenship; chief among these elements are the principles and the practice of virtue; and experience abundantly demonstrates that there is no better text-book for inculcating those principles than that history and literature of the Hebrew people which we call the Bible.

DEPARTMENT OF SUPERINTENDENCE.

INDIANAPOLIS MEETING.

SECRETARY'S MINUTES.

FIRST DAY.

MORNING SESSION.—TUESDAY, FEBRUARY, 16, 1897.

The Department of Superintendence was called to order at 9:30 o'clock in the assembly hall of Plymouth Church by the President, C. B. Gilbert, of Newark, N. J.

"America," led by Miss Wilkinson, Director of Music, Indianapolis.

Mr. Woolen, representing the Commercial Club of Indianapolis, welcomed the convention and tendered the use of the club rooms for the service of the members.

D. K. Goss, Superintendent of Schools of Indianapolis, extended a welcome on behalf of the teachers of the city.

President C. B. Gilbert replied to the words of welcome in behalf of the department.

W. N. Hailmann, Superintendent of Indian Schools, Washington, D. C., presented the report of the Committee on Plans to Collect Data concerning Methods and Courses of Work in Elementary Schools.

The paper of Dr. Hailmann was discussed by N. C. Schaeffer, State Superintendent of Public Instruction, Pennsylvania; Edward R. Shaw, University of New York; C. F. Carroll, Superintendent of Schools, Worcester, Mass.; E. E. White, Columbus, O.; William T. Harris, United States Commissioner of Education, Washington, D. C.

The department then adjourned.

AFTERNOON SESSION.

The afternoon was devoted to the round tables, as follows: "Child Study," conducted by M. V. O'Shea, of the University of Buffalo; "College Entrance Requirements," conducted by A. F. Nightingale, of Chicago; "National Teachers' Certificates," conducted by Ossian H. Lang, of New York city, and "County Superintendents," conducted by W. H. Senour, of Brookville, Ind.

EVENING SESSION.

President Gilbert called the department to order at 8 o'clock and introduced Professor Edmund J. James, of The University of Chicago, who gave an address on "The Public School, the Future College." The department then adjourned to the Propylæum, where a reception was given by the teachers of Indianapolis.

SECOND DAY.

MORNING SESSION.—WEDNESDAY, FEBRUARY 17, 1897.

The department was called to order by President Gilbert at 9:30.

The following committees were announced:

COMMITTEE ON NOMINATIONS.

N. C. Dougherty, Peoria, Ill., *Chairman*, C. J. Baxter, Trenton, N. J.,
C. G. Pearce, Omaha, Neb.

COMMITTEE ON RESOLUTIONS.

F. Treudley, Ohio, *Chairman*,
F. B. Cooper, Iowa,

S. T. Dutton, Massachusetts,
R. H. Halsey, New York,

Warren Easton, Louisiana.

Dr. Charles DeGarmo introduced the following resolution, which was adopted :

- *Resolved*, That a committee of seven be appointed by the chairman of this meeting to formulate a detailed plan for a report on elementary education, to be submitted to this body at its next meeting.

The first paper, on the subject of "The Province of the Supervisor," was read by L. H. Jones, Superintendent of Schools, Cleveland, O. A paper on "Supervision as Viewed by the Supervised" was read by Miss Sarah L. Brooks, of St. Paul, Minn. The discussion on these papers was led by C. F. Carroll, Worcester, Mass., followed by Miss Sarah Arnold, of Boston, Mass.; John W. Carr, of Anderson, Ind.; Frank B. Cooper, of Des Moines, Ia.; F. Louis Soldan, of St. Louis, Mo.; A. E. Winship, of Boston, Mass., and L. H. Jones, of Cleveland, O.; after which the department adjourned.

AFTERNOON SESSION.

The afternoon was devoted to the round tables; on "Public Libraries and Public Schools," conducted by J. H. Van Sickle, of Denver, Colo.; on "Summer Sessions and the Arrangement of the School Year," conducted by Orville T. Bright, Superintendent of Schools, Cook county, Ill.; on "The Three R's," conducted by J. M. Rice, of New York, and of state superintendents, conducted by John R. Kirk, of Jefferson City, Mo.

EVENING SESSION.

Professor W. M. Tomlins, of Chicago, Ill., delivered a lecture on the subject, "Music in Education," after which the department adjourned.

THIRD DAY.

MORNING SESSION.—THURSDAY, FEBRUARY 18, 1897.

The department was called to order at 9:30 o'clock by President C. B. Gilbert. Charles R. Skinner, of Albany, N. Y., President of the National Educational Association, after a few words of explanation, introduced the following resolution :

WHEREAS, There is now pending before the Congress of the United States a bill amending "The Act to Regulate Commerce," having for its purpose the prevention of frauds upon the traveling public by restricting the sale of railroad tickets to regularly authorized agents of transportation lines; and

WHEREAS, The Inter-State Commerce Commission has officially characterized the business of ticket scalping as "a fruitful source of crime" and a convenient method for the violation of law and the disposal of counterfeit and stolen tickets; and

WHEREAS, The passenger officials of the transportation lines find scalping offices and scalping practices the greatest impediments to the granting of reduced rates for conventions of educational, religious, and other bodies of a similar nature, from the fact that by the use of acids, false stamps, and other means, the destination of tickets is frequently altered, the limit changed, and legitimate passenger traffic of the country generally demoralized; and

WHEREAS, Laws of a similar nature are in force in other countries, and with results satisfactory alike to the public and transportation companies; therefore :

Resolved, That in the interest of public morals, and of the many associations of the country which depend for their success upon reasonable excursion rates, concessions, and privileges, the Department of Superintendence of the National Educational Association, in convention assembled, respectfully and earnestly urge the Congress of the United States to give prompt and favorable consideration to the bill now pending.

After considerable discussion, a rising vote was taken, and the resolution was adopted.

Mr. E. O. Vaile, of Chicago, offered the following resolution :

Resolved, That in publishing the proceedings of this and future meetings of this department, until it is ordered otherwise, the Secretary of the National Educational Association is hereby directed to use such simplified spelling as may be fixed upon by the following committee :

Dr. W. T. Harris, United States Commissioner of Education, *Chairman*,
Superintendent F. Louis Soldan, St. Louis, Mo.,
Superintendent Thos. M. Balliet, Springfield, Mass.

This resolution was adopted.

Superintendent A. T. Barrett, of Chattanooga, presented the name of that city as a place of meeting for the next year. Superintendent J. A. Shawan, of Columbus, O., presented the name of that city. Superintendent W. B. Powell, of Washington, invited the department to meet at that place. A rising vote was taken, resulting as follows: Chattanooga, 133; Columbus, 56; Washington, 38. On motion of Mr. Shawan, Chattanooga, was announced as the choice for the next meeting.

The Committee on Nominations made the following report:

For *President*, N. C. Schaeffer, of Pennsylvania;
For *First Vice-President*, F. B. Cooper, of Iowa;
For *Second Vice-President*, E. H. Mark, of Kentucky;
For *Secretary*, W. L. Steele, of Illinois.

The report of the committee was accepted, and the persons named declared elected as officers for the ensuing year.

President Gilbert introduced Superintendent N. C. Schaeffer, the President for the ensuing year.

President Gilbert then announced the following Committee of Seven, in accordance with the motion of Dr. Charles DeGarmo:

W. N. Hailmann, Washington, D. C.,	L. H. Jones, Cleveland, O.,
John Dewey, Chicago, Ill.,	Miss Sarah C. Brooks, St. Paul, Minn.,
S. T. Dutton, Brookline, Mass.,	Miss Sarah L. Arnold, Boston, Mass.,
Mrs. Alice H. Putnam, Chicago, Ill.	

On motion of Mr. Hailmann, Mr. Dewey was made chairman of the committee.

Superintendent Samuel T. Dutton read a paper on "The Correlation of Educational Forces in the Community."

Miss Ida C. Bender, of Buffalo, N. Y., delivered an address on "The Relation of Citizens and Teachers."

Superintendent Aaron Gove, of Denver, Colo., spoke on "The Proper Use of School-houses."

The papers were discussed by R. H. Halsey, Binghamton, N. Y.; E. B. Prettyman, Baltimore, Md.; J. A. Shawan, Columbus, O., and B. C. Gregory, Trenton, N. J.

The department then adjourned.

AFTERNOON SESSION.

The session was devoted to the following round tables: "The Essentials of a Course of Study," led by C. G. Pearse, Superintendent of Schools, Omaha, Neb.; "School Sanitation," led by A. P. Marble, Assistant Superintendent of Schools, New York city; "The Herbart Society," conducted by J. W. Jenks, Professor of Political Science, Cornell University; round table of city superintendents, conducted by O. T. Corson, State Commissioner of Common Schools, Columbus, O.

EVENING SESSION.

The following resolution was introduced by L. B. Evans, Superintendent of Schools, Augusta, Ga., and adopted:

Resolved, That a committee be appointed by the President of this department for the purpose of bringing to the attention of the National Educational Association at its meeting in Milwaukee the advisability of appointing a commission of its members to visit the World's Exposition at Paris in the year 1900, and such other places as they deem necessary, to investigate the display of educational material and product as made by the various countries of the world, and to report their findings and comments thereon to the National Educational Association.

On this committee the following persons were appointed: L. B. Evans, Chairman; W. T. Harris, E. E. White, A. W. Edson, F. Louis Soldan.

Dr. W. T. Harris, United States Commissioner of Education, addressed the department on "Art as Related to Education."

The discussion was led by W. H. Maxwell, Superintendent of Schools, Brooklyn, N. Y.

The Committee on Resolutions made the following report:

Resolved, That the Department of Superintendence hereby expresses its deep sense of appreciation of the marked courtesies extended to it by the superintendents and teachers of the public schools and by the Commercial Club of the city of Indianapolis; and to the President and other officers of the department it extends its sincere thanks and congratulations for those arrangements whereby has been insured one of the most successful meetings known in the history of this organization.

Resolved, That we recognize the great power of the press in promoting and sustaining public sentiment in behalf of education, and express our appreciation of the attention given to the proceedings of this department by the daily papers of Indianapolis.

Resolved, That the evidence of educational progress seen in the representative character of this meeting, the breadth of the themes discussed, and the catholicity of their treatment are causes for encouragement and congratulation.

Resolved, That the department views with great satisfaction the increasing efficiency and widening influence of the National Bureau of Education, and believes that public opinion will sustain Congress in any action looking to the placing of this bureau on a level with other bureaus of the Department of the Interior.

Resolved, That we approve the enactment by many of the states of the Union of compulsory-attendance laws, and that we hereby give expression to our belief that state supervision is necessary to the proper enforcement of those laws.

Resolved, That we hereby give expression to our hearty approval of the action of the executive of this government in appointing as superintendent of Indian schools one who had been closely identified with the educational interests of this country, and especially with the administration of the common schools; and that we cordially indorse the conduct of the Indian schools under the present able management.

Resolved, That approval is hereby given to the proposition that a committee be appointed to draft a report setting forth clearly and in detail what should be considered the minimum standard of professional qualifications to be required for state certificates; said committee to consist of sixteen members, as follows: The United States Commissioner of Education; the present President of the National Educational Association; the present President of the Department of Superintendents; four state superintendents; three state normal school principals; two principals of local training schools; two presidents of boards of education; and two others.

Respectfully submitted,

(Signed) { F. TREUDLEY, *Chairman*,
S. T. DUTTON,
F. B. COOPER,
R. H. HALSEY,
WARREN EASTON.

The report of the Committee on Resolutions was adopted.

Subsequently President Schaeffer appointed the following named Committee on Uniform State Certificates:

EX OFFICIO.

Commissioner W. T. Harris, Washington, D. C. State Superintendent Chas. R. Skinner, Albany, N. Y.
State Superintendent N. C. Schaeffer, Harrisburg, Pa.

STATE SUPERINTENDENTS.

Hon. O. T. Corson, Columbus, O. Hon. Frank Hill, Boston, Mass.
Hon. C. J. Bagster, Trenton, N. J. Hon. G. R. Glenn, Atlanta, Ga.

PRESIDENTS OF BOARDS OF EDUCATION.

L. T. Dickinson, Chattanooga, Tenn. Geo. T. Ettinger, Allentown, Pa.

STATE NORMAL SCHOOL PRINCIPALS.

E. B. Prettyman, Baltimore, Md. A. R. Taylor, Emporia, Kan. Z. X. Snyder, Greeley, Colo.

PRINCIPALS OF LOCAL TRAINING SCHOOLS.

F. W. Parker, Chicago, Ill. Harriet M. Scott, Detroit, Mich.

AT LARGE.

Ossian H. Lang, New York, N. Y. David K. Goss, Indianapolis, Ind.

President Gilbert then thanked the department for the co-operation it had given him in conducting the deliberations, and declared the department adjourned.

L. B. EVANS, *Secretary*.

PAPERS AND DISCUSSIONS.

REPORT ON PLANS TO COLLECT DATA CONCERNING METHODS AND COURSES OF WORK IN ELEMENT- ARY SCHOOLS, TENDING TO PROMOTE A VITAL CONNECTION BETWEEN SCHOOL STUDIES AND THE EDUCATIONAL DEVELOPMENT OF THE CHILD.

BY W. N. HAILMANN, SUPERINTENDENT OF INDIAN SCHOOLS, WASHINGTON,
D. C., CHAIRMAN.

The purpose of this report is neither to criticise existing methods of work nor to propose new methods. It simply endeavors to emphasize the generally recognized desirability of securing or preserving vital contact between school instruction and the life of the child at every point and in every phase of the work. While the majority of schools may desire to establish and to preserve such vital contact, their success in this is quite uncertain. This is due not so much to the difficulties of the enterprise, as it is to the lack of unanimity in the details of the aim, to an equally unfortunate lack of unanimity of views concerning the essential nature of mental life, and, above all else, to the absence of familiarity with successful experiments in vital teaching.

In order to remedy this it is desirable that available data concerning such experiments be collected, critically sifted, collated, and placed at the disposal of the profession; and the chief object of this report is to point out how this may be accomplished.

With this purpose in view, the report has formulated in a few practically self-evident propositions the prominent features of the mental acts involved in the chief directions of life utterance, emphasizing in each case the pivotal phases of activity as the mind turns or is turned to the respective inner or outer stimulus, seeks its bearings and determines its attitude, and enters, finally, upon more or less deliberate self-expression. These formulas, as presented in the following paragraphs, will afford a common ground for the collection of the desired data. They do not, however, pretend to serve as ultimate principles, but merely as practical guides in a thoroughly practical work.

1. Full mental life leads from experience or experiment, through thought or theory, to achievement or practice. The school recognizes this in the formula "From analysis to synthesis." The beginning of analysis is in experience, and synthesis ends in achievement; both take place in thought, guiding the will and giving it content. On the side of experience thought is apperceptive and results in knowledge or apperceptive ideas; on the side of practice thought is introceptive and results in conscious purpose or introceptive ideas. In apperception the mind forms for itself mental pictures of its successive experiences in terms of whatever related previous experience it may possess; in introception the mind places its apperceptive capital at the disposal of related purposes, with a view to their achievement. In apperception the mind adapts itself, as it were, to experience and environment; in introception the mind controls experience and compels environment.

2. In thought development on the side of knowledge the genetic series begins with perception and leads through reason to insight. The immediate judgments of perception deal with things and phenomena; reason deals with the logical connection of ideas; the intellectual discernment of insight deals with ideals and their realizations, as a true mediator between knowledge and the will.

3. In the liberation of the will the genetic series begins with the stimulation of interest, proceeds through attitude, in which the will becomes conscious of its object, to its goal in aspiration, in which the liberated will has attained consciousness of itself and of its free power. This merely practical view of the subject is in no way opposed to the philosophic theories of the essential freedom of the will, nor to the various psychological views of its birth in the self-preservative energy of the soul. In the practical assertion of its essential freedom, as well as in the practical development of its self-directive mastership of life, the will necessarily passes through the phases of process indicated in the formula.

4. On the achievement side of mental development the series begins with play and, through increasingly purposeful effort, leads to productive and creative work. In play the development of power is the reward and instinctive object of the activities involved; in the pursuits of purposeful effort the attainment of some external object, more or less clearly defined in consciousness, is the reward of these activities; in productive and creative work man fashions his environment in accordance with the inner conscious needs and aspirations of his soul. Play secures growth; pursuit secures outer well-being; creative work attains inner peace or happiness.

5. As life expands, social union in purpose and achievement, as well as sympathy in experience and thought, become desirable. This calls for deliberate attention to the social attitude of the children. These must

now learn to find through thoughtful orientation their respective relations to the common work, to adapt themselves to the requirements of their allotted parts, and to devote their energies to the common achievement with a minimum of regard for selfish considerations.

It should be remembered that in each series of the respective formulas the three terms do not represent distinct and, in themselves, complete processes, but rather phases of one process in which the first term of the formula marks, with reference to the observer, the beginning, and the third term of the formula, relatively, the end. Thus interest is not a distinct and in itself complete mental condition or act, but the initial phase of some more or less definite act of self-assertion in which the will, under some inner or outer stimulus (interest), assumes a more or less definite attitude towards some more or less definite inner or outer object (purpose), and, recognizing its own power with reference to the achievement of such purpose, identifies itself with this purpose in aspiration. Strictly, in the mind of man, interest, purpose, and aspiration are one and simultaneous; they appear distinct only in the measure in which the observer is hampered by limitations of time in the very constitution of his own mind.

Even in the fundamental formula it will be noticed that the three terms—experience, thought, achievement—are but the three phases of one mental act. In the first of these phases the mind appears as concerned predominantly with its own subjective condition, under the influence of inner or outer stimulus; in the second it appears as viewing these things more or less objectively and as material available in definite life-utterance; in the third such life-utterance reaches its consummation. Similarly every synthesis begins in analysis, and every analysis ends necessarily in synthesis. Similarly, too, apperception and introception designate but the terminal phases of the one process in which ideas are assimilated into the will-life of man.

Vital connection between school studies and the child's educational development exists whenever these studies are conducted in such a fashion as to appeal to full mental life on the pupil's part in accordance with the formulas just presented. The school, in its work, must recognize the fact that mental life which does not rest on the pupil's experience is, like a plant lifted out of its soil, doomed to perish without growth or fruitage. It must, on the other hand, remember that the legitimate fruitage and purpose of all mental activity lie in self-expression, in life-utterance, in achievement in which the conscious self-activity of man asserts itself as the determining factor. All thought development must rest on perception and enrich insight which is in direct relation with the purposes and ideals of man; all interest must tend to the liberation of will; all play must lie towards productive and creative activity, which, in its

turn, is impossible except as it rests on the spontaneous fervor of the play spirit.

At all times and in all it does, too, the school should remember that fullest mental life is found, not in the achievement of individual ends, but in the sympathetic co-ordination of individual purpose-life with that of others in common social endeavors and in active mutual devotion to worthy universal ideals. It should, therefore, establish a vital connection of school studies, not only with the child's individual development, but also with his social development. In other words, it should nurture individual development always with reference to social efficiency, in an atmosphere of social efficiency, and in the light of worthy human ideals. It should take cognizance of the sociological necessities of life, and should stimulate in its work, with increasing distinctness and emphasis, such specialization and division of labor and massing of individual effort as the common enterprises at its disposal may permit or demand.

A few illustrations from actual school work will indicate more clearly, not only the full bearing of the formulas presented in this report, but also the character of the data which, in the opinion of your committee, it is desirable to collect, to collate, and to place at the disposal of the profession, in order to aid the school in its efforts to vitalize its work.

In a first-year grade thirty children were engaged in a number lesson with beads. On inquiry it was found that they were preparing to ornament the teacher's blackboard for the approaching Friday afternoon exercises, which parents and friends were invited to attend. It had been decided that, for this purpose, it would be desirable to prepare as many strings of beads as there were children, that each string was to carry forty-eight beads, or four twelves, each twelve made up of four threes—successively red, orange, yellow, green. On completion of the stringing, a committee of children, selected by a vote of the class, examined the strings as to their correctness in the work. Another committee, similarly selected, placed the strings on the board in accordance with the preconcerted plan, a work which involved the careful measuring of "eighteen inches apart" and the rhythmic alternation of the color series.

In this exercise the eager, vigorous, spontaneous stretching forth of the child's play instinct into the light of conscious aspiration is manifest. Every phase and point of the play-work has its legitimate beyond. The threes look to the twelves, the twelves to the forty-eights; each color calls for its successor; the whole is consciously related to the festoon which is to grace the teacher's board on the approaching festive occasion. The school has provided an almost ideal opportunity for an ideal experience, stimulating thought and purpose, securing achievement which, in its turn, becomes again an experience, initiating a mental act of a higher order.

Equally manifest is the constant urgency in this exercise towards benevolence, co-ordination, rational union of self-assertive individuality in a worthy common pursuit.

On the following Monday this same class was found eagerly engaged in measuring a number of things in the room as to their dimensions, in connection with a "game" in which the children had estimated these dimensions. The names of the things had been written on the blackboard, and each child had copied this list on a sheet of paper before him, adding his estimates of the measurements. Each child, too, had made from stout cardboard a measuring rule of three inches, with subdivisions in halves and quarters. Groups of children were engaged in measuring various objects and in entering the results of their work in the proper places on the blackboard. One of these groups measured a table, three feet wide, as follows: "3 inches, 6 inches, 9 inches, 1 foot, 1 foot 3 inches, etc." Everything was done in a thoroughly workmanlike manner, without mutual disturbance and with every manifestation of sincere, personal interest in the outcome of the work on the part of every child.

The vital connection, in this exercise, between the number knowledge gained in the bead-stringing exercise of the previous week and the higher form-knowledge sought in the later "game" is evident, as well as the vital adherence to the other formulas in the report, including the lifting of individual purpose into social efficiency. Every onward step in thought and achievement rests clearly on well-defined experience, provided by the school, and serves, in its turn, as a higher and clearer experience. On the basis of clear perceptions the child reasons in his estimates and, again, in his measurements; and gains in subsequent drawing exercises, based on these measurements, ever deeper insight into the form characteristics of his environment. What, at first, came to the child as play is lifted insensibly, but surely, towards serious, purposeful work, without loss of spontaneity on the child's part. From what, at first, seemed but an interesting diversion the children are raised without violence, yet firmly, into an attitude akin to that of conscientious devotion to duty. And, throughout, individual efficiency is taught to serve the wider purpose of a social group of friends, and to find in this service the deep gratification that rewards unselfish participation with others in a common work and the high joy that flows from deeds of active benevolence.

In a fourth grade the children had been interested in dogs. They had been asked to bring to the school for the reading lesson some story showing the usefulness and fidelity of dogs to man. Every child seemed to be prepared and eager to contribute his share to the instruction and enjoyment of the class. The children, without exception, read clearly and well. Their purpose, evidently, was that class-mates and teacher, to whom the story was supposed to be new, should understand and enjoy.

Two children read from manuscript: they had been unable to find stories in print and had, consequently, written down some experience of their own or some remembered story. The general interest and attention of the class were intense. The entire exercise was in strange contrast with the ordinary reading exercise, in which all the children and the teacher have the same printed story before them, and in which the content of the lesson is not rarely sacrificed to certain technicalities.

The teacher informed the visitor that, at a subsequent lesson, the stories would be discussed, the principal facts noted down on the blackboard and utilized in a variety of language exercises; and that, still later on, the children would prepare descriptions and histories of dogs with which they were familiar. She said that, on the basis of her previous experience, she expected much beneficial influence from these exercises upon the children's kindly feelings towards animals; she might have justly added "and towards each other." It may be well to add that the children's proficiency in reading, writing, and spelling was quite unusual for children of this grade. It seems scarcely necessary, however, to point out in detail in what particulars this exercise was in fair accordance with the requirements of our formulas.

In another fourth grade the children were engaged in "form study." Each child had received a square sheet of paper of some shade of blue. One of the children, a little girl, dictated simple foldings, looking towards the lozenge. After each successive folding she asked simple questions as to the geometrical results of the work, and received definite, clear, respectful answers. When the lozenge was reached, the teacher assumed control in a natural, unostentatious manner: it was evidently now "her turn." She drew "in the air" a square, an isosceles right triangle, a trapezium, at last a lozenge; then its longer diagonal, its shorter diagonal, etc.; and received from members of the class accurate descriptions of her actions and of their effect upon the lozenge, both in words and in drawing. Subsequently the children joined in the construction of a social design with the help of their lozenges. This became the basis of an exercise in drawing and coloring, in which the children devised suitable borders for the design. These borders, the teacher said, were to be subsequently examined by a committee, selected by the class. The committee was to make a report on them, accepting or rejecting the suggested borders, and furnishing the reasons for their decisions. In the case of disagreement or appeal the teacher gave the final decision.

It will be noticed how in this exercise, as a whole, deliberate experiment with reference to relations of form is followed by equally deliberate thought under the teacher's direction concerning the character of the newly found lozenge; how, subsequently, definite purpose is developed, utilizing the newly gained knowledge in creative achievement, in self-

active self-expression. It will be further noticed how directly and economically the simple perceptions are led through equally simple, although perfectly adequate, reasoning to clear insight into their bearing upon the child's ideals in the final work; how, from a simple, pleasurable interest in the pretty folding sheets, the children gradually lift themselves into the attitude of the earnest seeker after knowledge and into the fervent aspiration of the artist; how effectively devotion to a common, social end is secured in helpful, mutual adaptation and without prejudice to individual development and self-assertion.

In a seventh grade much interest had been stimulated in the flowers of the spring. On the teacher's desk had been displayed for several days bouquets of them, contributions from pupils whose homes afforded them access to the woods. In obedience to the spontaneous desire of the pupils an excursion was planned, in order to see the flowers in their natural homes. The children knew them by name, but knew little of their details of structure and habits of life. During the excursion attention was directed to the conditions under which they grew, the character of the soil, moisture, exposure to sunshine, etc. A limited number of specimens were gathered for home and school. The teacher, without ostentation, provided a sufficient supply of spring beauties for further study at school on the following day.

On the following day she gave each child a specimen, and led them to examine the details of structure, taught them the uses of each part in the life of the plant, helped them to infer the reasons for certain peculiarities of structure in root, stem, leaf, etc. Careful notes were made on the blackboard, as the lesson proceeded, by one of the children designated for this work.

On a following day the class, as a unit and under the guidance of the teacher, collated these notes in a systematic essay on the habits and structure of the plant, and to this essay the teacher added a few literary gems, in which the spring beauty played a part. The class was then divided into a number of groups, and to each group the teacher assigned the task of studying some other spring plant from the number observed during the excursion. Each group was again subdivided. In a group of six, *e. g.*, two children were to report on the life and habits of the hepatica, two children on its structure; one was to report on its place in literature, and one was to furnish one or more artistic sketches of the plant.

The report day was a joy to all concerned. Each child had given himself with heart and soul to his work, with a view of furnishing pleasure and information to the class and, possibly, of doing worthily his part in a common enterprise; and each one was more than repaid for his devotion by his gain from the contributions of his class-mates.

Here, again, it seems practically needless to point out how well, on the

whole, in this exercise the various vital connections which this report has formulated are secured, with large gains to the subject of instruction, to individual development, and all other conventional desiderata of the school, and with the additional gains of true scientific fervor, generous devotion to duty in concerns of social efficiency, artistic elevation, and the divine aspiration of benevolence as the prime motive of life-conduct.

Similar illustrations might be multiplied; others might be added of courses of study, the distribution of work for the year, the daily or weekly time-tables, the construction and use of the school plant, the character and use of school appliances, and a variety of other things that enter into the work of the school. In all of these there may be more or less successful consideration of the laws of vital connection. The few types here represented, however, will have to suffice for the purpose of this report. They indicate with sufficient clearness the character of the data which it is desirable to collect, to sift critically, to collate, and to place at the disposal of the profession, in order to enable schools generally to vitalize their work more and more effectively.

The presentation of data or illustrations of work which is not in accord with the principles here enunciated may profitably be omitted. Their presentation and criticism would involve needless controversy and, perhaps, pernicious bitterness of feeling. The task of the committee, proposed in this report, is not to make war upon school practices which are steadily waning. Their entire attention and energy should be given to the presentation of examples of successful modes of procedure, and to deductions from these of reliable rules of action and criteria of method at every step, from the simplest lesson in language to the critical study of Shakespeare, from the simplest exercise in drawing to the construction of a machine or the execution of a work of art, from the preparation of the simplest lesson in drawing to the elaboration of the most complex course of study. Thus will they aid the armies of earnest and thoughtful teachers in their endeavors to realize their hope of bringing every detail of school life into full vital connection with the children's destiny in a life-efficiency which shall be in harmony with the worthy ideal and hopes of the social group of which they are a part, and in consonance with the destiny of mankind.

The details of this work, the character and manner of distribution of the circulars to be sent out, the criteria to be applied to whatever data may be sent in or gathered, their collation, the deduction of simple rules of action and criteria of method, and, finally, the form in which the results of the labors of such a committee are to be presented to the profession — all these things must of necessity be left wholly to the committee, and cannot even be foreshadowed here.

The appointment of a committee to do the work here implied is in full accord with the policy of the Department of Superintendence and in line with the work heretofore done in this direction by the department. The report of the Committee of Ten upon the chief desiderata of courses of study, and that of the Committee of Fifteen upon the proper correlation of studies in such a course, etc., call logically for an effort to determine to what extent the practical work of the schoolroom satisfies the philosophical and economic requirements of these reports, and for measures to make successful work in these directions accessible to the profession at large.

Among the plans that have suggested themselves to your committee the following seem to be the most promising of success:

1. The pedagogic department of some university might readily collect such data with the help of suitable circulars of inquiry, calling for courses of study, detailed descriptions of class work, as well as typical samples of work done by the children.

2. The pedagogic departments of a number of universities might be requested to unite in similar work under the auspices of the Department of Superintendence and of the National Educational Association.

3. The Department of Superintendence might appoint from its midst a committee to do this work under the auspices of the National Educational Association.

4. Plans 2 and 3 might be united by the appointment of a limited committee of, perhaps, five from the direct membership of the Department of Superintendence, endowed with power to add to its number a stated number of representatives of pedagogic departments of universities and normal schools.

Each of these plans has its advantages and disadvantages. The first plan secures from the beginning perfect unity of purpose and control, as well as, consequently, a most desirable intensity and concentration of work. On the other hand, it implies much limitation of the field of labor and a possible one-sidedness in aim and method which might seriously reduce the value of results.

The second plan affords the advantages of a wider field of observation and of a sufficient fund to defray the necessary expenses, but it suffers from probable lack of unity in purpose and control, and removes the fund from the immediate control of the Department of Superintendence.

The third plan would, indeed, preserve for the department the immediate control of expenditures, but it would place the details of the work upon the shoulders of men whose official duties are not in consonance with the requirements of arduous, scientific research, nor with the stimulation of experimental work in schools not under their immediate control.

The fourth plan practically combines the advantages of all the others and, thereby, eliminates their disadvantages. It secures sufficient unity of control, as well as sufficient intensity and concentration of work in its (five) original members, directly responsible to the Department of Superintendence. It secures the widest possible field of observation and breadth of view on the part of the body of scientifically trained observers. It supplies the necessary funds and places their expenditure in the hands of members directly responsible to the donors.

Your committee would, therefore, recommend that a special committee of five be appointed, to be known as the *Committee on the Vital Connection of School Studies and Educational Development in Elementary Schools*, and whose duty it shall be to collect and to collate data on this subject in accordance with the suggestions of the above report, and to report the results of its labors to the Department of Superintendence in the year 1899; that this committee be empowered to add to its number ten members of the National Educational Association who are connected with the pedagogic departments of universities or normal schools; and that the National Educational Association be requested to place at the disposal of this committee an adequate sum to be expended in the furtherance of its work, under the customary limitations of such expenditures.

The tendency of the school and the yearning of the race are for an educational practice that will aid the very life of man—individual, social, and universal—at every point and in every measure; an educational practice that will lead the young to field and forest, to the workshop and laboratory, to hearth and home, teaching them to find highest joy in beneficent industry rather than in indolent pastime and nervous excitement, in the creative activities of a liberated will rather than in the glittering passions of emotion and fancy; an education that will yield workers and builders, discoverers and inventors, fathers and mothers, useful and devoted citizens—open-eyed, open-hearted, open-handed; an education that will not lose itself in the bogs and morasses of literature, art, and mere erudition, but which, resting on the solid gains of these in history and heredity, moves steadily on to fresh conquests, rescuing literature, art, and erudition alike from the heat of passion and the decay that follows in its train; an educational practice, indeed, that enters into the very heredities of the race and lifts it nearer its destiny as generation succeeds generation.

Nothing can so effectively help the advent of such educational practice as the labor of a committee like the one just proposed, taking an inventory of whatever examples of successful work it can find of the character described, deducing from these reliable criteria of method and rules of practice, and enabling the profession, as a whole, to see and tread securely the path of life in its work.

PAPER ON THE REPORT OF THE COMMITTEE.

BY N. C. SCHAEFFER, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION,
PENNSYLVANIA.

I approach the discussion of this report with a strong feeling of diffidence. It is the sequel to an address delivered at last year's meeting. The diction of both documents reminds me of Froebel and Hegel and Schleiermacher. The chairman of the committee is our great apostle of Froebel; for me to enter his special domain as exegete or critic would savor of trespass and presumption. Upon explanations of Hegel Commissioner Harris has a claim which no one has dared to dispute, not even the Herbartians. So far as I know, no one has attempted an exposition of Schleiermacher in the English tongue. It is true there are occasions when the influences which remain from earlier studies tempt me to roam in transcendental fields of speculation. At such times the mind dwells upon general statements of pedagogic truth, upon formulæ in which words like analysis and synthesis, symbols and things, apperceptive and introceptive, occupy very prominent places. When, perchance, the mind drops into this subconscious state, I feel as if something wonderful were to be achieved by aerial flights of thought, by the formulation of creeds which differ from the ancient creeds in that they do not sum up the beliefs of the faithful of every age and clime, but hardly represent the views of anybody except the author, sometimes not even the views of the author twenty-four hours before or after the creed was written. But when a rap at the door brings me back from the land of pedagogic reveries to the stern realities which confront a superintendent of schools, the outlook suddenly changes. The primary teacher who has entered my office picks up the programme of the Department of Superintendence. As soon as she has read the caption of the committee's report, she startles me by asking: "Is it not a fact that you educators use these high-sounding words and learned phrases to hide your own ignorance of what ought to be done in the training of the child?" The insinuation makes it necessary for me to clarify her ideas as well as my own. In the discussion which ensues we have no difficulty in seeing clearly that, on the one hand, there is a world of truth and beauty and life which is at hand for educational purposes, and, on the other, there is a host of growing children in the schools who are to be trained into mature men and women. But how is the world of truth and beauty to be linked with the mental life of each child? How are the school studies, which embody the truth nearest at hand, to be utilized in the educational development of the child and of

man? The preceding paper asserts that there must be a vital connection between the two. "What is meant by vital in this connection?" Says my tormentor: "Webster says that vital means essential or very necessary, and also that it means living or relating to life. Who will dispute that the connection between school studies and the development of the child is essential or necessary, and who will deny that the connection between these studies and the growing child must be a living connection, but what gain is there in such statements for us primary teachers in our daily work? What is the good of all your philosophy if it does not bear fruit in the actual work of the schoolroom?"

- In reply I suggest that we turn to one who was greater than Hegel and Herbart and Froebel; to the one of whom we read that he sat down and taught, and through the ages he has been known as the Great Teacher.
- In the record of his life we read: "So when they had dined, Jesus saith to Simon Peter, Simon, son of Jonas, lovest thou me more than these? He saith unto him, yea, Lord, thou knowest that I love thee. He saith unto him, feed my lambs." In this figure of speech the lambs symbolize childhood, and the Great Teacher likens the act of teaching children to the process of feeding the lambs. In other words, the assimilation of foods finds its parallel in the assimilation of knowledge. The assimilation of
 - food is an organic process; organic is the term which Mr. Hailmann employed at Jacksonville. How does the organic differ from the mechanical? In a mechanism the relation between the several parts is external. If a cog-wheel or any other part of machinery breaks, I can replace it by substituting another cog-wheel, or a piece similar in all respects to the broken piece of the machine. In an organism the relation between the parts is an inner relation brought about by living forces. A branch cannot be broken from a tree and another attached in a merely external way. In the wonderful process of budding or of grafting the bud or the graft becomes a part of the tree through a process of growth. We have instances of substances being incorporated in an organism without this living connection. A stone placed between the branches of a tree may ultimately be surrounded and covered by the trunk of the tree; but it bears no living relationship to the tree itself. A bullet may lodge in the human body, it may be encysted, if it is not removed by the surgeon's knife, but it never can be said to be assimilated as an organic part of the
 - human frame. Is it possible to lodge in the mind of the child statements, definitions, and entire paragraphs which are, indeed, carried by the mind as the body carries the encysted bullet, but which are not assimilated in the living way. They may not be incorporated as an integral or organic part of the child's mental life any more than the lead is made part of the human body or the stone is made part of the tree. Very much of the memorizing at school is a lifeless process. You can get at the bullet in the

human body by a surgical process, and you can often get out of the mind what is learned mechanically by that surgical operation known as the examination. The removal of the bullet leaves the human body in better condition than before; the examination sometimes rids the mind of much useless stuff, which is fortunately dropped as soon as the examination is ended; often, however, the examination only serves to fix the useless stuff so deeply that it can never be eliminated or forgotten. "Of all the exercises of the school," says Fitch, "there is none which has so little heart in it as learning by heart." "To know by heart," says Montaigne, "is not to know at all."

Plato, indeed, expresses the same thought when in the "Protagoras" he says that knowledge is the food of the mind. Food is not assimilated as soon as it is swallowed. It must be transformed into something else, otherwise indigestion is the result. As long as the mind simply holds a truth in the exact form in which it was given by the teacher or learned from a book, so long it resembles the food which, instead of being transformed into chyme and chyle and blood, remains unchanged in the stomach, causing the multitudinous ills of indigestion and dyspepsia.

So important is this transformation of knowledge that I venture to recall to your minds a favorite illustration of Gough. A crying child was disturbing the slumbers of every passenger in a sleeping car. A gruff miner from the far West, whose patience had been exhausted, at length exclaimed: "I would like to know where that child's mother is!" The person in charge of the child replied: "In the baggage car in a coffin." The information communicated in those few words was immediately changed into sympathy. There was not another word of complaint throughout the journey. In the case of the old miner it was further transformed into will, into purpose, for ere long he got up from his berth and began to carry the child to and fro, doing his best to make it contented with the strange surroundings. If the lessons of the Old Testament history which are imparted in the Sabbath school remain in the memory in the exact form in which they were given, and do not pass over into action, conduct, and daily life, the teacher has failed in spite of all the answers which the quarterly review may elicit from the class. If the lessons in United States history are not transformed into the sentiment of patriotism; if they do not pass into a purpose to live, yea, to die for one's country; if they remain a mere tissue of dates and names, and stories of battles and court intrigue—then the lessons in history have not been properly assimilated, the teacher has failed in spite of all the high marks which his pupils may have made at the annual examination. This, I take it, is what Mr. Hailmann means when he says, "from experience, through thought, to action."

"Except the grain of wheat fall into the ground and die, it abideth

alone; but if it die it bringeth forth much fruit." The ideas which lodge in the mind must perish in their original form before there can be a harvest of thought and sentiment and purpose. If an audience can give a discourse word for word, or even in logical outline, it is not proof positive that the preacher has succeeded. Still less is it evidence of success if they speak of his rhetoric, his delivery, his profundity of thought, or his brilliant metaphors. The flock has been properly fed only when the ideas of the discourse have been transformed into a harvest of thought, sentiment, and purpose, and thus have made themselves felt in the life and conduct of the audience. Here, indeed, we strike the most important phase of the assimilation of knowledge and spiritual truth. The food is not merely transformed into chyme, chyle, and blood; but its elements are carried to different parts of the body and assimilated as nerve and muscle, fiber and bone, so that the food becomes an integral part of the physical man. The truth on which the lambs are fed is to be assimilated so as to become essence and life of the soul. The knowledge which is imparted at school is not to remain as mere theory in the pupil's mind; its function is not merely to excite interest and to stir the mind into activity; its mission has not been accomplished until it has passed into action, into conduct, into life.

Here my tormentor interrupted me by asking: "Do you mean to banish all memorizing from the schoolroom?" "By no means," I replied; "you must not press a figure of speech until it squeals." Many of the words of thought and faith and hope and love and phrases that are employed in describing the higher life are derived from the world of sense and sight, and are figures of speech based upon the relations of things in the physical world. It is possible to push these metaphorical expressions until they convey half-truths or even untruths. In one respect knowledge differs from food. Food which has been swallowed cannot remain in the stomach unchanged for a long time without causing indigestion. On the other hand, a bit of jeweled eloquence, a statement of truth in the form of a definition which marks, perhaps, a triumph of intellect, a gem of thought or sentiment which is valuable by reason of the form in which it is expressed or enshrined, may with advantage be treasured in the mind; and it may take years before it is fully understood, appreciated, and made an organic part of the mental life of the pupil.

The lambs are found in flocks. The gregarious instinct is an adumbration of the social element in man. Instruction must bear fruit, as the report asserts, not merely in the life of the individual, but also in the life of society, of the state, of the church, of the race. Froebel refused to take charge of the education of the son of his sovereign, the grand duke, because the young prince was to be educated apart from other children. Benjamin Franklin hinted at this difficulty when, in giving matrimonial

advice, he said: "Young man, beware of only daughters." The growing youth needs the educative influence of daily contact with companions of nearly the same age both in the home and in the school. The committee deserves our gratitude for emphasizing this phase of education.

At this point the bell rang. The primary teacher departed; and I felt as if I had made a valiant defense of Mr. Hailmann's position, even though I had not fully clarified to myself and my friend the entire content of the report.

One suggestion, before I close. The paper assumes that data are to be collected for the purpose of determining methods and courses of work in primary schools which tend to promote a vital connection between school studies and educational development. Who is sufficient for this task? What was the test which the Great Teacher applied to Simon Peter? "Simon, son of Jonas, lovest thou me more than these?" Did he mean, "lovest thou me more than thou lovest these, the other disciples?" That sort of jealousy never found a place in the heart of the Great Teacher, and wherever it exists it unfits the individual for pedagogic work. Did he mean, as Luther translated the passage, "Simon, son of Jonas, lovest thou me more than these love me?" Must a teacher be pre-eminent above his fellows, say as a professor in some favorably situated university, before he can undertake to collect the required data. If Luther's interpretation be correct, the Lord meant to teach Peter a lesson of humility. University pride is perhaps as great a hindrance to success in work of this kind as any obstacle which can be named. There is a third interpretation possible, which Dr. Higbee claimed was better than either of the others. The word translated "these" may refer in the original, as in English, to things, as well as persons. "Simon, son of Jonas, lovest thou me more than these things, these fishing tackle, this occupation of fishing which puts sheckels into your pocket and gives you standing in the world?" If in the collection of data you have in view your chair in the university, or your reputation for scholarship and original research, or the preparation of an article for a magazine, or the discovery of something novel which shall draw attention to yourself, then you lack the qualification for this kind of work and, in fact, for teaching in all its forms and phases. The question to Simon Peter is twice repeated, though with the omission of the comparison. "Simon, son of Jonas, lovest thou me?" "Yea, Lord, thou knowest that I love thee." "Feed my sheep." So close is the relation between the Great Shepherd and his flock that the supreme affection which He claims for himself passes over to the lambs and the sheep of his flock, insomuch that whatever is done unto the least of his brethren He accepts as done unto himself. When the data are collected for the sake of childhood, when the interests of self are subordinated to the interests of the little ones in the primary school, then and only then may we hope for valuable results from this particular kind of child study.

DISCUSSION.

DR. EDWARD R. SHAW, *New York University School of Pedagogy*.—The report of this committee emphasizes the higher aim of the school. If I have been able to analyze the report correctly, it embodies two ideas: First, the Froebelian idea of beginning with play and passing from this, through purposeful effort, to productive, creative work. In other words, the report lays stress upon the necessity of the self-directed activity of the pupil in every exercise which the school imposes upon him.

To evoke self-effort on the part of the pupil is the highest achievement of all method. The reason for this lies in the fact that many more phases of will are thus developed, and greater mobility is given to each series of ideas which the teacher seeks to develop in the child's mind, and greater power given to the manifold interconnection of these ideas. The whole content of the mind is more easily directed or brought to bear upon the solution of any question presented, or upon the acquisition of new knowledge, when the self-effort of the pupil is evoked in fullest measure by the teacher. It is through self-effort that the child makes the most intelligent, the quickest, and the surest progress. It is difficult, we must admit, to evoke in teaching this self-effort of the pupil. But in the degree in which a teacher is able to do this, in that degree is teaching easier, more efficient, and its results more abiding. The importance, then, which this report attaches to the value and the necessity of the self-directed activity of the pupil in acquiring such an education as our schools may give is a point which all engaged in the work of education must concede, and a point which cannot be too strongly or too often forced upon the attention of teachers.

The main second idea of this report is that of social co-operation on the part of the children in all their exercises, in order to develop in them a higher regard for altruistic ends and the sinking of selfish considerations in this desire and effort for the common good. To this idea, also, we must give our hearty assent; but, at the same time, we cannot refrain from questioning whether this second aim which the report places before us is full enough—whether there is not another point which the report should have provided for. We may question whether the report does not lay too much stress upon sinking the individual for the sake of the end of practical good will and benevolence towards all, and does not fail to lay stress upon individual ideals—how these may be formed—and the self-realization of these ideals.

The main aim of the report is admirable, and the time has come for turning the attention of all who superintend, supervise, and teach our schools to the fact that the schools, besides giving intellectual development, should have a higher aim than this—an aim transcending that of mere intellectual equipment, namely, a truly moral aim. The Herbartian movement in this country, to which we are indebted not only for much clearer light, but also, I must say in passing, for no little confusion, has called attention especially to the ethical aim of the school; it has brought into the professional consciousness of American teachers a higher ideal, in that it has urged that the ethical ideal of the school is the highest one. With this idea now taking root, this report is most timely in calling further attention to the idea and seeking to give it a firmer hold in the consciousness of the teachers of this land.

The purpose, then, of the report and its presentation before this department is admirable and timely, and could it be made to emphasize more strongly how, alongside of altruistic, practical good will and benevolence, individual ideals may be formed and these ideals realized in the self of each youth, I could give it my strongest commendation. I doubt not but that the committee will see this, and if the matter is carried further by this

department, attention will be given to this point — the implanting of high ideals and their self-realization.

But to that part of the report which deals with the collection of data I do not find it so easy to assent. We have here a scheme or stupendous plan proposed for the collection of data, and, frankly, I must say that I cannot see how this collection of data is to be accomplished. Does the committee intend that the proposed commission shall print the data it collects in a large volume for circulation? Would it be a volume of 300 or 400 or 500 or more pages? This is a very large undertaking, and I do not see how it can be accomplished. But suppose the commission should collect large quantities of data and issue them in a volume, is this the best means that can be used to lead teachers to appreciate the great aim which the report emphasizes? Such a mass of data, consisting largely of descriptions of class work and typical samples of children's work, would be, I believe, confusing and misleading to teachers; they would be unable from its perusal to derive the general principles inhering in those data. It may be replied that this is concrete presentation, and that out of this concrete presentation the abstract generalizations will grow. To my mind the educational principle, namely, "the concrete before the abstract, or, the surest way to the abstract is by means of the concrete," breaks down at this point. Such a collection of data would, I believe, lead to a great deal of rote work and imitation on the part of the teachers, and because of this mass of confusing detail they would fail to see the larger problem which it was the intention of the collectors of the data to place before them; it would lead to narrower work and would not prove the stimulus intended. I do not believe, then, that the stimulus towards the realization of the higher aim of the school can be imparted by a collection of data. If we could have a commission that would formulate clearly this higher ethical aim of the school, a commission that would go over the whole ground philosophically and state in clear and cogent language the general guiding principles to be followed in making the work of the school ethical, in the end much more would be accomplished than by placing before teachers of the country a collation of data. The statement of these principles would point the way and give each teacher the greatest freedom to work out in an individual manner the means to be employed with each class and with each school. This end is to be attained, not by following the specific exercises of any teacher, but it must be an outgrowth of the spirit and aspiration on the part of the teacher who has become thoroughly imbued with these ideals. The end, then, is to be achieved, I believe, through that large spiritual stimulus that would call forth through liberty and inspiration the best that every teacher could devise. In achieving such an end the letter killeth, but the spirit giveth life.

SUPERINTENDENT C. F. CARROLL, Worcester, Mass.—We have not yet reached the bottom of the whole matter. The report of the Committee of Ten was very valuable and helpful, but did not go far enough. The report of the Committee of Fifteen came along in its time, but it also did not go far enough. What we need is a report which will get down to the actual practice of the schoolroom in the everyday application of well-known pedagogic principles; in these the opinion of women teachers will be most valuable and helpful. It seems to me that a series of reports of classes actually heard in the school and illustrating the proper application of correct principles would be invaluable to the profession. The volume might take 500 pages, but what matters that? The plan proposed is a good one, and should result in a great deal of good.

DR. E. E. WHITE, Columbus, O.—I desire to call attention to some necessary limitations of the principles announced in Dr. Hailmann's paper. Thought should not always be carried into achievement; it is not always possible, and it is not always desirable that it should be so. There is a great value in pure thinking unconnected with any efforts at achievement. If we should attempt to make actual, visible, and tangible all the thoughts

that men think, we would find ourselves involved in much futile, uninteresting, and unnecessary work.

It occurs to me that just now we need a study of *limitation* as well as a study of *generalization*. Our courses of study have been the subject of enlargement and extension, until now they have assumed enormous proportions. It is high time that abridgment should begin, and a reaction is steadily setting that way. We must not lose sight of the fact that intellectual power is the result of pure intellectual gymnastics, and that there is great educational value in pure thinking. All literature of the highest order, such as the drama and ethics, and all speculative science of a metaphysical kind are in the domain of pure thought. We do not deny the value of what Dr. Hailmann has said, and there is great value in having each thought worked out practically, as far as it is possible to work it out. That thought is correct, and I do not deny it; but I wish to set over against it another thought, which is to the effect that at times thoughts are valuable for themselves—pure speculation has its advantage.

DR. WILLIAM T. HARRIS insisted that the object of our study should be for the unity of principles, and that we should leave the detail of the methods of working out these principles to the teachers in the various schools. One teacher may have one way of doing it, and another teacher a different way, and yet both may be right. A principle may be one, but its application may result in an infinite number of details. If we should attempt to collect reliable data for illustration, it would take many volumes for even one large city, and after they were collected it would be too voluminous for anybody to read. The line of vitality leads us to principles. What we want to do is to get the profession alive and vitalized by a complete appreciation of essential principle. If that be done, the actual detail need not concern us.

When the Master asked Peter the question, "Lovest thou me more than these?" he meant to inquire if the apostle loved him more than he loved these details of fish-hooks, nets, and preparations for feeding. The object of the inquiry was to lead him away from the minutiae and into the great principle of loving children and saving men.

DR. HAILMANN, in closing the discussion, protested against the ignoring of the small affairs of our work. The infinitely great is built upon the infinitely small; everything is relative and depends on how we look at it. There is no difference in the eyes of Him who made everything, whether it be infinitely small or infinitely great. Principles are essential, are important, but it is the practice of those principles that we must attend to. Some men are capable of pure thinking who are not capable of pure living. Some superintendents will think accurately on pedagogical subjects whose schools, if investigated, will show nothing but mechanical work. What we want to see is that these principles are carried out in the daily work of the schoolroom. What is the use of having principles if they are not put into practice? Dr. Harris and I are viewing this subject from different standpoints. He wishes to theorize about it continually, trusting to teachers themselves to absorb his theory and put it into practice. What I wish to do is to say as little as possible about the theory, but to see that the work is done right in the grades.

Achievement means also thought and means also aspiration. There is in my mind no doubt about the fact that a thought uttered is an achievement; a book written is an achievement. Whatever men have done in the realm of pure thought may still be classed as among the practical results of life. When pure thought is expended in mere empty sound and has no meaning and no value and contains no truth, then it is to be condemned. When it results in self-adulation it is worse. But pure thought should result in pure life, and nobler aspirations.

Finally, we contend for an independent, American school, utterly divorced from any ideas of Froebel and Herbart. We do not want a Froebelian nor a Herbartian school

system, but an American school system. America has the character and the independence to have an independent system of schools, and it is high time we abandon any idea of modeling ourselves upon any other country.

THE PROVINCE OF THE SUPERVISOR.

BY L. H. JONES, SUPERINTENDENT OF SCHOOLS, CLEVELAND, O.

There are two parties to the process of supervision of schools—the supervisor and the supervised. I treat the subject from the standpoint of the supervisor. You will then hear from the other side. It is well that the supervisor should speak the first word. He usually fares badly when the other party secures the floor. But I am to speak of the province of the supervisor. I treat at first of certainties, leaving disputed territory for later consideration.

It is proper to say in the beginning that I do not mean that any one supervisor will at any one time do all the things I mention; but that these things are within his province, and necessary, as things go, to the best schools.

I. The supervisor should set the standard of work, *i. e.*, should teach his teachers what is justly called successful work—a degree of success which will satisfy reasonable expectations, above which the teacher may go as he wishes to excel, and below which he may fall only at his peril. This work has four prominent methods, all of which are required for the full accomplishment of the work. The most important one is that of testing pupils through written examinations presented by the supervisor, without notice to either teachers or pupils. The questions for these tests should be prepared with the utmost care, and made to cover the portion of the work upon which a judgment is desired. It is necessary to have a care as to the kind of question that is to be put forward when it is desired to set up a standard of teaching. The questions should require an application of knowledge rather than its reproduction by memory, since their character in this respect will determine, to a great extent, the trend of future effort by the teacher.

1. The answer papers written by pupils in response to these questions should be carefully studied by the teacher, but not percented. The desire of the teacher to place the results of his teaching in figures should not be encouraged. Percenting papers always tends to exalt non-essentials beyond their deserts, and to obscure the less obvious, but more important, elements of real progress in study and recitation. When the teacher has familiarized himself with the contents of the papers, the supervisor should

do the same. Then the two should confer in a spirit of friendliness, but with the hope of coming to a conclusion, with reference to the results, which shall be of future value. To secure the full benefit from such a conference there must be absolute frankness and earnestness by both parties. All successes must be fairly noted, all failures frankly admitted, and all mitigating circumstances fully considered. Then judgment must be rendered; and the teacher must understand that the standard applied is an expression of the superintendent's best judgment and intended as a guide for future effort. Such a test should come neither at the beginning nor the close of a term or a year, but so soon after the beginning as a sufficient amount of work has been done to afford an adequate field for testing. The teacher then has an opportunity to profit by such standard for the correction of errors, the supplying of deficiencies, and the general improvement of the work. Afterward such tests as are needed in connection with promotion of pupils can be given, but these should not be confused with those referred to above.

2. The second movement in the matter of setting up standards is the oral test. This should be given after the written one and should cover the same ground. The questions should be less formal than the written ones, and the superintendent, in conducting the test, should be on terms of good comradeship with the pupils. Pupils should be encouraged to enlarge upon the questions given and express as fully as possible the more liberal phases of the teacher's work, which cannot be so easily reached by the more rigid requirements of written test. Many excellences of good teaching will manifest themselves in this way, and by contrast failures stand out in emphatic prominence. The teacher should study the work while in operation and confer with the superintendent about it afterward.

3. The third is the observation by the superintendent of the actual teaching which the teacher does. For this purpose he should make his personality as completely non-effective as possible, allowing the conditions in the school to be as nearly as may be what they would be without his presence. A conference should follow, in which a judgment is pronounced upon the work. The teacher here should be thrown upon the defensive, in that he should be held for a reason for each step of the process; and he should be held to show how the principles of education are fully vindicated by tangible results. Purposelessness in teaching should meet with no encouragement; but native grace and capability should, like beauty, be accepted as their own reason for being, when the results are present and incontestable.

4. The last exercise in this list is that of model teaching by the superintendent. This should be done in the presence of the teacher and under as nearly as may be the limitations which the teacher is required to observe. A superintendent should never lose the touch with child mind

which comes only by teaching children themselves. His counsel will be more eagerly sought and more zealously followed by his teachers if he can teach better than they in their own schoolrooms. Indeed, whether he can do so or not, a general confidence in his honesty of purpose will be developed by his willingness to subject himself to criticism on an equal footing, *viz.*, simple merit.

II. The superintendent or supervisor should create for his teachers ideals of possible attainment in the different provinces of educational work. This is a work distinctively different in kind from the setting-up of standards of work to be immediately realized under existing conditions. Standards are authoritative. They should be accompanied by the demand for their immediate and unconditional realization. Ideals should draw by their own attraction. The disturbance which they create is that divine discontent which always has in it an element of hopefulness. To have this element of hopefulness in them, ideals must be founded on the actual. In order to be full of inspiration, they must transcend what now is. Two steps of the procedure are here made plain. It is necessary to make the actional seem rational, and the best seem possible. In many instances ideals are so constructed as to make the corresponding actual seem so meager by contrast as to excite little hope and no enthusiasm. A wise superintendent will take care to find instances of work in which the methods and results can be shown to have the direct relation of cause and effect. The special elements in the methods which are causes of the best in the results may be detached from their encumbering incidents and made to stand out glorified in the white light of reason. It is a great service to teachers to show them wherein what they have been accustomed to do is the result, after all, of rational effort, though they may have been unconscious of its full import at the moment of its doing. Teachers are more able and willing to begin to study for improvement after they have been assured that change does not necessarily mean revolution.

But it is in the sphere of ideals that the influence of the supervisor, if he be capable, is of supremest worth. Ideals of education must be developed in the minds of teachers, so as to inspire to highest and noblest effort. These ideals must express the hope of the future and cast such radiance over the plain path of common teaching as shall make it seem the very way of salvation to pupils and teachers alike. Teaching is a thing that cannot be well done for money. The good teacher earns a higher salary than he usually receives, and he should be better paid. He can teach better by reason of being better paid; but he must have a higher motive than mere money before he can really earn the higher salary of which he is capable. To be of highest worth he must have the noblest conception of the nature and worth of the work he is trying to do. This conception or ideal, when it is sufficiently noble, will of itself develop the

enthusiasm and consecration necessary to the most efficient teaching. I scarcely ever fear that a conception of education will be gained that is too high, too strenuous, or so high that it cannot be to some considerable extent realized. I have occasionally seen a teacher, with an elevated notion of his work, unable to realize his ideal from failure to understand the *rationale* of its accomplishment. At one time in my own experience I held an ideal of teaching so far above my own power to actualize that I grew despondent. But I chanced to see a young lady teaching a school in a little frame schoolhouse on North Third street, Richmond. Ever after I knew that my ideal was too low; and I must yet study the means by which the tension between the ideal and the real could cease by their perfect blending. No doubt the highest ideals are never realized; but the greatness of work is nevertheless produced by the presence of the ideal which lies unrealized within it.

It is told of Leonardo da Vinci that, while painting "The Last Supper" in the little chapel at Milan, he had little difficulty in painting his ideal of each face till he came to that of the Christ. Here he pondered long, and, when challenged for the reason of his delay, said that, though he had a perfect ideal of the ineffable grace and beauty which should play upon the divine-human face, he had not yet discovered the particular mixing of the paints and the special disposal of light and shade which would produce this effect. He found it easy to find suggestions for the other faces—even for that of Judas. In like manner we have always about us examples of poor work; but we wait long for suggestions for the highest and best. Art critics say that the picture was never completed, and that there are some unfinished touches on the face of the Master. But the greatness of the picture is due to the very imagination which here almost passed beyond the sphere of actualization. I am never afraid that the greatness of work in teaching will suffer from too high an ideal, provided that the conception is honest. Indeed, precisely here are the highest province and the greatest privilege of the supervisor. One can easily set a standard of what must be done; but one can set no limits to what may be accomplished. The ideal of education is never a fixed quantity. The terms "good" and "poor," as applied to school work, are relative. One degree is good till a better is thought, when, without any essential change in itself, it quietly glides into the other class. The teaching act is never itself a fixed fact; it ebbs and flows as life itself recedes or abounds. Being a spiritual process, only spiritual forces serve. High ideals so re-enforce spiritual powers that they give virility and impressiveness to the teaching act as nothing else can do. A true teacher who does not aspire is inconceivable. The instinct for right mental processes, that teaches us to know what questions to ask, what suggestions to make, what illustrations to use; which suits the action to the word, and the word to

the theme; which directs every movement through the multitudinous sub-processes of the successive steps of a long lesson—is rarely directed by a clearly conscious *rationale* of every movement. It is rather the half-conscious movement of a mind possessed by its ideas and impelled by a great love and a great hope. The light in which the spirit finds its way in guidance of the youthful mind through the maze never shines from the rear, but is rather a reflection cast back from an ever forward moving ideal, which attracts while it lights the way. The whole philosophy of education should be involved in the act of teaching, because it should be wrought into the ideal by careful and prepared study; but the *immediate* guidance is something higher than reason, suffusing the glow of the rainbow over all, but holding everything as sternly in order as if it were held in the grasp of destiny. Indeed, it is destiny, divinely and clearly understood, that guides the best teaching. He who can inspire his teachers to place themselves under this influence of the highest and best, and hold themselves there of choice, has solved the problem of securing good teaching. There is no need to grow discouraged if ideals are not always reached in daily practice; they tend to realize themselves, and each day's earnest effort but brings the good time nearer.

Browning says:

The high that proved too high, the heroic for earth too hard,
The passion that left the ground to lose itself in the sky,
Are music sent up to God, by the lover and the bard;
Enough that *He* heard it once; *we* shall hear it by and by.

The topics that should be studied by a superintendent with his teachers are as wide in range as the subject of education itself; and they are as numerous as its subdivisions. Not alone the professional subjects of psychology, child study, and methodology should be studied; but the studies must be pushed into kindred matters of art, literature, and science. Above all, the relation of school education to that given by business and the various institutions which co-operate with or succeed school life should be studied. School must be seen to be a legitimate part, but not the whole, of child life—especially it must be seen to be life itself. The child should not be led to consider himself so much as preparing to live, as he should be led to live and through living prepare to live better. A part of the weariness and drudgery of teaching is removed when the teacher finds that legitimate living with her pupils is a considerable part of her daily task.

If the superintendent can come to be the acknowledged leader in such broad consideration of the subject of education, he will have done much to enlarge the horizon of his teachers and to assist them to form liberal and hopeful ideals of their work. Such work must be carried on side by side with practical studies as to how to realize these ideals in school work. There are at least two forms of this study that are indispensable to a right

supervision of schools : (1) Joint study by superintendent and teachers of the pupils' mental processes and results while they are being taught by the teacher ; (2) practical teaching by the superintendent in the presence of the teacher, under the limitations of time under which the teacher is accustomed to teach. These call for but brief treatment.

I have no disposition to undervalue the kind of child study carried on by specialists. These studies are an essential part of the progress of the profession ; and the generalizations, when finally formulated and established, will constitute a valuable body of pedagogical doctrine. But the larger share of it is of such far-away character, of such technical nature, as to be unprofitable for the average teacher to carry on as part of her school work. All experiments which must have a special preparation in order to produce the conditions necessary for their study take on a more or less artificial character. At least I am convinced that no other child study is half so valuable to a teacher as that sympathetic study which an intelligent teacher can make of the members of her own school, as she is engaged in the regular teaching processes of the day, under the ordinary conditions and forms of the recitation. It is especially proper for the superintendent or supervisor to assist in this work. The teacher frequently does not know how to begin, or how to make the process most profitable. To obtain the best results there must be unity of purpose between supervisor and teacher, *viz.*, study for improvement, with as much as possible of the personal equation eliminated. The superintendent should remain a quiet, though intensely attentive, spectator of the recitation. He should then spend a little time in remembering the different occurrences which constituted the process of the recitation, preparatory to a consultation at the close of the school day. At this conference the philosophy of these occurrences should be carefully expounded and applied. The significant occurrences only of the recitation should be dwelt upon ; the illustration of characteristic mental actions noted in the work of both teacher and pupils should be noticed and explained. The psychological and pedagogical principles underlying every significant movement of mind in either pupils or teacher should receive attention. While the superintendent should hold himself responsible for explaining and applying principles to these instances of mental action involved in the correct and incorrect answers of pupils, and the correct and incorrect processes of the teaching act, the teacher should be held to justify every form employed by him in instruction and management. The whole should be a friendly contest, wholly separated from those conferences in which a superintendent must sometimes find fault with an incompetent or neglectful teacher. To make a very brief illustration, I will recount a single incident which occurred in my own experience a few days ago. I entered a third-grade room as the recitation in number was in progress.

The teacher was one of two years' experience—strongly grounded in her faith in forms, brought about by her rather recent normal-school training. She was teaching a number lesson. She began with a series of mental problems based on the tables: $4 \times 6 = ?$ The pupil addressed said 24. The teacher said "And 7?" The pupil, using 24 as one term and "and 7" as the other factor, merely said "31." The teacher said "One-half of it?" the pupil, "15 $\frac{1}{2}$." The teacher, "And 6 $\frac{1}{2}$?" pupil, "22." Teacher, "Divide by 11," etc., etc. Three long series identical as to general method were given in succession. Pupils had grown listless, paying attention to answers only. Every problem given required the answer to be used as the basis of the next process. The fourth series began with "4 times 3?" A pupil answered "12." Every child mentally seized 12 and held it as the basis of the next problem. Without any evident intention on her part, the teacher gave as the next problem "3 times 4?" without the slightest indication of contrast through intonation. The boy was dumbfounded; not because he did not know the product of 3 times 4, but because he could not exactly see how to perform the process of 3 times 4 upon 12, which had been the previous answer, and which, by the form of the exercises which had preceded it, he had been led to expect must be used. He stood without answering. The teacher told him it was easy, asked him to hurry, and did many other things which a nervous teacher will do under such circumstances, and finally, in order to help him still more, said to him, "Just turn them around," referring to the reversed order of the factors as compared with those of the previous problem. But the only thing the boy had in mind was 12; so he turned the *figures* around and blandly answered 21. The explanation of how that boy came to answer 21 was one of the most valuable lessons in psychology and methodology that this teacher ever had.

In this way it is possible to study with teachers the real meaning, together with the common abuses, of those forms of work commonly called methods. Having its foundation in the real work of the recitation, when the teacher is presumably doing his best, the whole study has a practical bearing very helpful to teachers; and it is free from the generality and abstractness of text-book work in psychology and methods on the one hand, and the artificiality of experimentation on the other. In preparing for such work I would never seek to lay down conditions favorable to experimentation, but rather to lay down conditions which will secure good teaching. The only experimentation allowable is that which can be done incidentally, while the best possible work is being accomplished. But the supervisor should not limit his work to this kind of study. A similar study of his own work should be made. He should teach the teacher's class in the presence of the teacher, doing the very best teaching of which he is capable, under all the limitations which affect the regular

teacher in the same work. When the work has been done, the same careful analysis should be made of it as was recommended for that of the teacher. A searching criticism should be made upon the work of the supervisor himself, extenuating no fault, and magnifying no merit; but calmly and discriminatingly examining it as a work of art. When the supervisor has done the best he could, let him stand or fall in the estimation of the teacher by his own work. The advantages of this teaching side by side with the teacher are incalculable, many of them being in the interest of the supervisor himself. The close and constant contact with actual children, under actual conditions, keeps the supervisor's mind in a sane condition as respects criticism; while the evident absence of any attitude of unfriendliness will operate to make the study a fruitful one to the teacher. While the teacher may not reasonably be expected to be able to supervise, the supervisor may reasonably be expected to be able to teach. If he will actually do so in the presence of his teachers, he will effectually disarm criticism of his own criticisms.

I have touched thus inadequately upon but a few of the numerous duties which fall within the province of the superintendent or supervisor in a system of schools, larger or smaller as the case may be. It is true that, if the system be small, these duties may all fall to the lot of one person. In a larger system there may be many supervisors, among whom a division of work may be made, more or less rigorous in its separations. So far as may be, in my judgment, it is best for each superintendent to engage in several or all of these functions, to the end that he may retain his freshness of touch and his sympathy with children. He is less likely to become arbitrary in his judgments of work and of teachers.

I shall speak of but one function more. This belongs to the superintendent as supervisor. I refer to the selection and discharge of teachers. Having set the standard of work, no one else can be so competent as he to find the right people to do this work. A poor teacher sometimes saves a good school by failing to be reappointed. No one knows these opportunities better than the superintendent who has seen him teach and who has faithfully tried to make him capable of doing the work well. Whatever other complications may grow out of the matter, I believe it essential to good schools that the superintendent should, either by law or by consent of the school board, have the selection and assignment of teachers. This involves, of course, the promotion of teachers for improvement and the discharge of the incompetent. This procedure may sometimes work to the end of shortening the official life of the superintendent; but even this would not be an unmitigated evil in some systems. At least while he did remain in office he would be able to direct the work to some purpose; and when he was gone the ground would be clear for his successor.

SUPERVISION AS VIEWED BY THE SUPERVISED.

BY SARAH L. BROOKS, ST. PAUL, MINN.

The action of the superintendents in giving a place on their programme for the consideration of a few sentiments from the supervised is in line with the custom of successful generals of noting, although in a surreptitious way, the opinions of their soldiers concerning the day's action and the plan of campaign.

Baron Thiebault, of Napoleonic fame, says it was his custom to pass from group to group of men about the camp fires at night, to hear their comments, and that he was frequently surprised at the accuracy of their judgments, tersely stated. Whether these judgments had any effect upon the plan of campaign we have good reason to doubt, because Thiebault himself was "a man under authority," appreciated in the hour of necessity for his judgment and devotion, but neglected when honors were bestowed because pride forbade the pleading of his own cause.

It is, however, the teacher's province "to reason why." She is urged on all occasions to put thought into her work, and attempt to comprehend the end as well as the beginning before undertaking a series of exercises. She is not placed between the superintendent and the child simply to transmit power, but to interpret and apply, in an intelligent manner, the plans of the one to the needs of the other. Her critical interpretation should tend to modify the former in the degree that the richness of her intellectual attainments and her personality influence the latter.

By accepting a position in any system of schools, a teacher tacitly accepts a certain form of government about which, in the main, she need not trouble herself. Her freedom lies, not in changing the existing order of things, but in devising ways and means of applying plans of instruction and methods of discipline to the development of the individual child, for whom the whole system exists. This freedom, wisely used, will insensibly react upon the whole plan, just as in any other department of life the best efforts of the individual react upon his environment for its improvement.

The more comprehensive and liberal the conditions under which one labors, the greater the opportunity for individual progress, and the more rapid the general advancement. It is, therefore, important that those who control these conditions lose no opportunity of acquainting themselves with the workings of the system, and with all due speed to modify the same, when necessary, to suit conditions.

By viewing the matter of supervision from the standpoint of the intelligent teacher, that which seemed liberal and helpful, or necessary under

the circumstances, may be seen to have the contrary effect from the one intended, and a readjustment found necessary.

The teacher is encouraged to be critical while standing as interpreter between the child and the plan of instruction; she is also expected to be able to pass judgment upon the plan as a whole. By this means she is able to put life into dead form, and to apply the same to the development of the child. To heed the criticisms made, thoughtful, shrewd, witty, with a mind open to conviction, is to be still "plucking the grass to see where sits the wind."

From the mass of material at hand I have endeavored to select a few of these criticisms, which may be considered legitimate and worthy of the consideration of the supervising force, because they have a direct bearing upon the efficiency of the schools.

The points touched, briefly stated, are dates of entrance into the kindergarten and first primary room, the course of study, meetings, the supervising force, and the teachers' tenure of office.

I. The first of these may be local, but the criticisms are of so fundamental a nature that they seemed to me to deserve mention.

Where admissions are made to the high school twice a year it is necessary to rearrange classes in the district schools at the close of the first semester. This rearrangement leaves some one or more rooms without its quota of pupils. To fill these rooms, children are removed from the kindergartens to the primary rooms, and new pupils admitted to both places, according to age and conditions. The weather being inclement at this season, comparatively few new pupils enter. A most important sequence of work is broken in the kindergarten. The kindergarten children enter the new field under circumstances detrimental to a successful beginning, because they must cope with pupils who undertook the grade work five months previously. Nature and the child are not in accord, so far as topics for observation are concerned, and both pupil and teacher are placed at a disadvantage.

In April, when the world is again new, when weather is propitious, and all things are in harmony, another class enters; necessitating another change of classes, and a loss of much precious time to the children in the efforts at readjustment. By this clumsy and illogical method certain classes pass through the hands of three teachers in one year, at an age when, timid and shrinking, they need the most careful nurture.

II. Comments made upon the course of study are of a more general nature, and have a wider significance.

Selection and arrangement of topics frequently prove impracticable because they lack the verification of test before adoption. A study of the whole plan reveals a lack of unity, which should result from a continuous and critical consideration of the whole field of instruction by the entire

supervising force. Instead of the one mind evident through all subjects, evidence too frequently points to a compilation. Aside from this, plans are too vague and indefinite, and are subject to a variety of interpretations and applications in the various schools, individual teachers being frequently a law unto themselves in the matter.

III. Criticisms of meetings come from great numbers of teachers, touching number of meetings, time of meetings, and matter presented. The greater the number of supervisors and special teachers, the heavier falls the burden of meetings, making grievous inroads upon time, strength, and money. If the justice of this comment is doubted by anyone present, perhaps a term's trial of teaching fifty children at forty-five dollars a month might convince the doubter, especially if he should reside a few miles away from the school, and from the point at which meetings are held. As a final touch, let the meetings be held between the hours of four and five, when body and soul are at the lowest ebb.

"Still," the faithful says, "I would not care so much for the cost in time, strength, and money, if the assistance and the inspiration given were equal to the outlay." In vain we urge that the city offers this assistance gratis, providing skilled instructors to furnish the same. There is something materially wrong, in spite of all this, when our best teachers give expression to these sentiments.

IV. Springing from the same root are two comments made upon the supervisor or special teacher in the regular visits from school to school, and their remedy is the same. They say criticism is destructive and discouraging, leaving the teacher without clearer views of what should be done, and too frequently without inspiration to seek a better way.

It is also frequently claimed that special teachers give no help outside their immediate work, and make such exactions upon time in preparation and upon the programme as are impossible to be granted. The last note of "disharmony" is reached when the teacher asks, "In case the principal objects to this plan, whom shall we obey?"

V. My last topic is that of appointment and advancement of teachers, and the dismissal of the incompetent from service. Principals and supervisors have cause to regret the appointment of teachers to a grade without sufficient inquiry as to their fitness for the place, and sometimes without fitness for any grade. This makes special trouble in the first year's work. There is also a feeling that the probationary period should be extended to a greater limit than is usually assigned. Many faithful teachers feel that promotion is not so dependent upon efforts and excellence as it should be, and the inference is universal that influence is the greatest thing in the world, recalling to mind, perhaps, the remark of the Unjust Judge, that not for fear of powers above nor below would he grant the woman's petition, but lest she weary him.

The perennial complaints of the inefficient are that no one tells them they are failing, and no one criticises them. Further comment is unnecessary.

A case diagnosed calls for treatment, but the physician whose diagnosis is excellent is not always the one whose practice is to be commended. It is easy enough in the present instance to point out existing causes of friction and discontent. Suggestions by which the same are to be remedied may seem impracticable in many cases.

DATES OF ADMISSION.

Bearing in mind that the first subject of criticism was the dates of admission to kindergartens and first primary rooms, there seems but one suggestion. Admit in September and April, when conditions are right, because nature and the child are in unison. If possible, arrange to have the teacher who receives in September keep her pupils through the following June, giving the April classes to another teacher, who will give them over to the care of someone else the following April. This arrangement will save from two to three months to the child in uninterrupted progress, and give him time to have many habits fixed under the guidance of skilled teachers, before he is compelled to form the acquaintance and learn the ways of another.

In the kindergarten, pupils entering in September would remain for the year, as, also, those in April, provision being made for both divisions, in double sessions, as is necessary in the crowded portions of the city.

THE COURSE OF STUDY

should have three points considered in its construction, in order to reduce friction to the minimum. It should represent the united efforts of the supervising force in council. The theory of the supervisor should, in all grades, be tempered by the practical suggestions of the best teachers in those grades. It should embody no plan which has not been previously tested in the schoolroom, and for which ample arrangements have not been made to help teachers to a clear understanding of the same. It should be a growth from within outward, susceptible to change from year to year from its very vitality.

Once presented to the schools, it should form the basis of many meetings, in which principles and plans are first discussed by superintendent, supervisors, and principals, and then by principals and teachers. New plans of work presented in this way would remove a source of misunderstanding between supervisors and principals, and do away with a whole series of meetings at a central building. Formulated and duly discussed, it should be enforced equally in all schools. Without this last we have anarchy, and not system, and must contend with the discontents and

jealousies aroused by unequal distribution of burdens. "In this case, what," say you, "will become of the progressive and ambitious teachers with genius and originality? Is there not danger of suppression and consequent discouragement?" The private citizen is restricted in nothing, so long as he lives within the requirements of the law; and if the law needs modifying, he even has power by his force of character, by his influence, to change the same. So with the teacher. There is abundant room for the exercise of every splendid quality in adapting the plan to her school; and if her experience proves something radically wrong in the plan, no one will be more gratified than the superintendent to modify conditions. The province of the superintendent, with his assistants, is here clearly indicated. The general plan belongs to him.

MEETINGS.

One relief in numbers of meetings was suggested above, when it was recommended that the course of study, and all new plans of work, be presented to principals first for discussion and explanation, and, later, by principals to the teachers under their charge.

The greatest harmony should exist between the supervising force and training school as to matter and method, and many conferences be held by them, in which critic, teachers, or directors of practice participate. Thus only will new teachers entering the schools be prepared to receive in the right spirit, and with intelligence, the criticisms and suggestions of supervisors. This trouble obviated, it only remains to deal with a limited number who need the help of meetings for criticisms, and the number will decrease from year to year. The city which entertains us is a beautiful example of this harmonious arrangement, and the spirit of its schools reflects the wisdom of the practice.

Each special teacher should be granted a specified time for meetings, varied according to the degree of technical skill required by the teachers in his department, after which time meetings are to be confined to teachers needing special help, and to presenting new plans of work. Thus, with a specified portion of time devoted to the training school, sufficient instruction can be imparted without regular meetings from week to week. By this arrangement leisure may be afforded for meetings, general and classified, in which the mind of the teacher is lifted above the wearisome details of work to the contemplation of higher things, and her desire for culture satisfied by the consideration of subjects in an orderly manner, impossible under existing circumstances.

THE SUPERVISING FORCE.

It is essential to all entering upon the work of supervision to have a clear notion of the province of criticism. To most people it is synony-

mous with fault-finding, in the disagreeable sense. It is a hard thing for a human being to stand face to face with his shortcomings, and there is small wonder that a teacher so situated immediately begins to defend herself by making excuses. Criticism has a nobler side, that of helpfulness and inspiration, which leads us to hesitate to say to a struggling soul, "That is wrong," unless we are sure we are able to suggest, "Try this better way." With this view of the work of a critic, one begins to cultivate the virtues of kindness and consideration, and to cast about for means to construct new scaffolding by which a new edifice may be constructed, before laying violent hands upon the old, imperfect structure.

To the bitter quarter of fault-finding add one part encouragement, one part suggestion, and one part practical instruction. Encouragement keeps hope alive; suggestion stimulates the mind to new investigation; and instruction supplies deficiencies in previous preparation. The most sensitive must respond to this form of treatment, and complaints of criticisms become a thing of the past.

The complaints arising from exactions of special teachers, from multiplicity of directions, and from conflicting orders, all come from one source, which is a lack of that unity of purpose through which, for the sake of harmonious action in the consummation of a desired end, one is willing to subordinate self and individual plans, and to consider his work as but a fraction of a great whole.

"The chief business of the superintendent is the organization and management of the system of schools upon certain general principles. What shall be the end and aim of the system? What subjects shall be studied? At what stage shall they be introduced? In what sequence shall they follow each other? What shall be the correlation of studies and methods at every period?"

To see that these matters are carried out in detail, and that teachers have sufficient technical instruction to introduce any new subjects added to the course, his hands and his brain must receive aid. Hence there has been created, in recent years, a corps of men and women who are supposed to labor in unison to carry out the general plan. Briareus of old had only the problem of a hundred hands to be directed by one brain. The modern Briareus finds each new hand endowed with intellect and its attendant ambitions, passions, weaknesses. The head and heart and soul of Briareus must be great enough to check, to encourage, to stimulate, to direct, and in all things to prove himself a leader, with but one end in view, and that the advancement of the interests of the public schools, which are the interests of the children. Thus only will dissensions cease and the source of authority be established. Men and women seek advancement naturally, and are eager to accept office, too frequently without pausing to consider the responsibilities of the position,

and their own powers to fulfill the obligations imposed by rank. Have we wisdom, insight, justice, moderation, discretion? If not, a burden awaits us more grievous than that which chafed the shoulders of Pilgrim, and a veritable Slough of Despond obstructs the way.

APPOINTMENT, PROMOTION, TENURE OF OFFICE.

The last matter, while seemingly simple, is, in fact, the most complex of all. Fitness for the position should be the only test of appointment and promotion, and unfitness attended by dismissal. The superintendent, in conference with his assistants, should be the sole judge of fitness or unfitness. How simple a case it seems! And yet the superintendent and the board of education, while probably desiring to be just and faithful in the discharge of these duties, are besieged, menaced, flattered, and cajoled by an army of people, who for personal, political, business, social, or unclassified reasons desire the appointment, promotion, or retention of some one or more persons, without consideration of age, fitness, or previous experience. If these conditions are not complied with, off comes the head and probably many of the hands of Briareus. To what is the country coming when one's plain duty is so hedged about by circumstances that its discharge means official execution or nervous prostration?

Appointments from without the city are largely ruled by examinations, and followed by probation, which should be clearly understood by the teacher and principal under whom she works, and the supervisor and special teachers immediately interested. In confirmation, promotion, or dismissal all parties officially interested should be consulted, so that no room for prejudice be given.

Candidates from the training school should come in the order of excellence presented by the principal and critic teachers, and not in the order of personal interests or the degree of sympathy one may have been able to arouse in some member of the board, the mayor, minister, or other prominent person.

A more trying class still remains to be considered. The applicants may or may not have taught, may or may not have had previous preparation. Through financial or domestic misfortunes, influential friends make out a strong case in their favor, pleading their need, their qualifications; but the candidates themselves are unable to pass the examinations. Duty seems plain, but the various lights turned upon it distort the perspective. Who is able to grapple with these cases in all their complexities, and who is willing to shoulder the responsibilities of acceptance or rejection? Courage to do the right can only come from a clear understanding of the province of the public schools.

Evils surrounding the dismissal of incompetent teachers can be lessened by extending the time of probation, and by preparing a list of

unsatisfactory teachers early, each year, to be placed in the hands of superintendent, supervisors, special teachers, and principals. These teachers should receive special care from the supervising staff, and clearly understand their position. If improvement has not been made at the close of the year, they are to be recommended for dismissal. It will be urged that in the event of informing the teacher of her standing the case is often complicated by the army of sympathizers she is able to enlist in her behalf. I grant the danger, but see no other honorable position to take in relation to the teacher; and a position once assumed must be consistently maintained, even in the tempest following announcements. Honest and fair means have been used throughout. Honor compels a stand to be made. If these are restored to position, it must be done over the veto of the chief, and the consequences be upon the heads of those who pass the measure.

The above may seem heroic measures, and more in accord with dreams than reality; but after years of scorching experience I am still convinced that what the city needs is men and women with moral stamina, who are willing to abide by opinions based upon personal knowledge of the situation, re-enforced by the opinions of collaborators, liberal-minded and competent to judge.

Here is an opportunity to educate public opinion by assuming the obligations imposed by rank, and holding a public trust as beyond all private fears or ends. We have the example of the Great Teacher "who for the joy that was set before him endured the cross, despising the shame." Perhaps you recall the passage from St. John, which is often in the thoughts of the writer. Facing physical anguish and certain of death, he, the strong man, in the prime of life, shrinks from the ordeal. "Now what shall I say? Father save me from this hour; nevertheless, for this cause came I unto this hour!"

In conclusion, there needs to be established throughout the system of schools a feeling that, whatever the circumstances, those at the head are actuated by professional motives as opposed to personal ambition, that those in authority are not unmindful of the difficulties which surround the individual teacher in her efforts to carry out the general plan and regulations of the system.

A spirit of fairness must encourage the best efforts of supervised and supervisor, and a feeling of confidence in the head of the system as courageous "to do the right as it is given him to see the right;" that he has not only a mind to direct, but a heart to respond to, the labors of the individual, in whatever capacity he may serve.

A spirit of harmony must direct the efforts of the whole supervising force, if we expect unity of action on the part of the schools. Otherwise true development is impossible, and the very end for which supervision was created will be defeated.

DISCUSSION.

C. F. CARROLL, Worcester, Mass.—In general, we can probably agree to what was said by Superintendent Jones, in regard to tests of school work. The principal use of the test must, however, be confined to determining neatness, accuracy, and form. It can scarcely show the best that a teacher is doing, much less can it show the best of which a pupil is capable.

This last statement is true, because a written test must be confined chiefly to work in penmanship, spelling, technical language, and simple sentence-making or reproduction. All culture subjects, in which we may include reading, geography, history, nature work, literature, music, manual training, cannot be satisfactorily worked out upon paper.

The list, therefore, is very small, and is confined chiefly to subjects that are purely mechanical. Culture subjects depend upon the instincts, upon feeling; imply a horizon, relations, soul. Any focusing, such as is called for in written examinations, tends to sacrifice the larger side. In fact, testing at this point is almost fatal, as we learned by sad experience under the old régime.

Written examinations by the superintendent will show the principals and teachers what subjects and what points he may desire to emphasize; but they may be dangerous for that very reason. The teachers, themselves, should be expected and required to give tests frequently, and principals should be asked to watch and direct both written and oral tests in all subjects. High-school teachers throughout the country generally review and test their work in mathematics and the languages at regular intervals.

The next three points in Mr. Jones' paper I can class as one. I refer to the oral test, to the observation by the superintendent of actual teaching which the teacher does, and to the teaching by the superintendent.

It is something of an art for a superintendent to know how to enter a schoolroom. A pleasant greeting is most important; anything more is likely to be a nuisance. Neither the class nor the teacher should be turned aside from the business in hand. The current should not be interrupted while he is present. Bluster, and much conversation, beyond a pleasant word, tend to remove all responsibility from the teacher, and change what ought to be a real business transaction to a hollow formality and a mockery.

Many superintendents never seriously listen to a recitation. Many more never take a primary class in hand, giving their suggestions in concrete form. Some do not do this because they have never learned how, others because they are prevented by dignity or by tradition.

It is absolutely necessary that a supervisor should teach constantly, if he would be a living part of any school system. A conference later with the teacher has its advantage, but can never do the same thing that can be accomplished by his questioning the children in the presence of the teacher. Moreover, these questions should always be in line with what the teacher is doing, if they are to be of assistance to the teacher. They should be given to show the teacher how to do her own work better, or how to carry it farther. Supervisors who do not thus identify themselves with the work of the schoolroom should have a name of their own and be classed by themselves.

Teachers' meetings afford altogether the best means of directing school work as a whole. At the teachers' grade meeting we stand directly at the center. If we have visited intelligently and have before us at the moment the strong and weak points that we have discovered in very recent visits, we can mold instruction to the full extent that our skill will permit.

The superintendent must get down to a few essentials in drill and emphasize these

points, not only by what he says, but by the best class exercises that he can produce. The use of the blackboard and of nature in teaching reading; the objective work in connection with teaching the multiplication table and fractions, tables of weights and measures; the preliminary interpretation of problems, writing of decimals, making of sentences; the giving of a lesson in penmanship—all these technical details should be gone over.

Either the superintendent or some person fitted to comprehend and carry out some consistent plan should give directions and full illustrations at the teachers' meeting. The most inexcusable and most criminal waste of time is made at this point, and Dr. Rice has not said too much in his recent articles on the necessity of teaching economically and effectively a limited number of essential points in the "three R's."

Moreover, a superintendent should conduct many of his own grade meetings. It has become the fashion for the superintendent to invite people to make addresses on education at his grade meetings. Such speeches are a farce, and are sure to be disconnected and as out of place as a magic lantern show.

I can subscribe most cheerfully to all that Mr. Jones has said relating to the effort called for by both superintendent and teacher. On this basis of hard work teaching may become a profession.

The physician, the lawyer, and the clergyman, the architect, and the artist, regard their work as a business and seek constantly to keep up to date; and they do this voluntarily.

The teacher who is thus enterprising can always be recognized, because she will anticipate the superintendent in most of his suggestions. She ranges the whole field of inquiry, and brings to her work things both new and old. Moreover, she prepares with care every lesson which she is to teach. She estimates in advance the work of the week. Every lesson is a review or has in it an element of review, carefully provided for in this preparation. Such a working-over and working-up of old material as a matter of principle is in itself the best form of correlation, is in itself a substitute for the old-fashioned examination, and makes the test only an everyday affair.

The papers read have treated chiefly of the superintendent and teacher. The pupil himself has been referred to only incidentally. I should insist that he demands the first place in this discussion. An improved knowledge of the child is changing theories of training teachers, and methods are sure to change with theories.

First, school hygiene is at present given a large place in pedagogy, and has a place upon the program of this convention. This is a good beginning, but we need to get much closer to the pupil. We need to discuss, not only heat, light, and ventilation; but also to discuss the growing body, its stored energy, the dynamic force that works upon the organism of every child, the impulse to movements that compel growth and drive on the child and the man in their ceaseless activities.

Biology has come to be the best part of physiology and physiology the best part of psychology, and physical and chemical forces are back of all. Nutrition has come to be regarded as the greatest fact in education, and a well-nourished child, living with cultivated people, will attain to their estate with a minimum of formal teaching. If he lacks proper food or fails to appropriate it, he will be deficient both morally and intellectually.

Studies of defective and criminal children show that they are usually improperly nourished, and that physical development has been arrested in a greater or less degree.

The most interesting spectacle, because the highest product of civilization, is the well-nourished child, abundantly active, free from unnecessary irritation or restraint, with interests that call into activity the many sides of his nature, moving on from one phase of his life to another, absorbing the best things—in other words, normal in estate and receiving the normal treatment sensed and dimly suggested in the immortal classic of Rousseau.

Another of the inner forces of education that has been brought to light recently is found in the emotions and instincts, supplemented by interest and attention; and, while all these are classified and treated separately, they are inseparable, have a common origin, and are a unit in character.

They are often more important than intellect. They condition even perception and rule reason. They must have free play at every stage, or a man defective at some point is the result. Restraint of instinct, restraint of affection, lack of normal interest, have been the marks of the modern school system, and the partial restoration of these to their proper places is the first problem of the modern school superintendent.

Another hopeful indication is the presence in this program of the subjects relating to the social forces that are co-ordinated with the school. We often lose our perspective and forget the part that the home, the church, literature, art, and society play in education. The "three R's" contribute but a meager amount of our intelligence, while our surroundings are all-powerful in their influence upon both character and judgment.

The intelligent supervisor must take these conditions into account. He must base his treatment of courses of study upon them, and his methods must be in general harmony with them. It is a good thing for teachers to look about for methods, to be thrown upon their own resources. Standards and general principles are, indeed, authoritative; methods, art, ways and means are incidental.

No man is more contemptible than he who plods along, following in the rear of his best teachers, following in the rear of the best public sentiment.

Our best teachers, our best citizens, are alive to all the questions that I have raised. Our best teachers are both broad and skillful. Woe to us if they outstrip us in their grasp of great questions; woe to us if we fail to do so much as to be able to interpret their art and intuitions, and to be able to both learn and impart the wisdom that they can teach!

SUPERINTENDENT J. W. CARR, Anderson, Ind.—I agree with Mr. Jones most heartily that the supervisor should be a man of liberal education, broad-minded, professionally trained, one who is able to point the way upward and then lead the way; that he should set the standard of efficiency of work in his schools, and then devise ways and means whereby this standard may be attained by all capable teachers. I also approve of the methods suggested whereby this standard of work may be attained, but I wish to emphasize one point especially, *viz.*, the personal observation, on the part of the supervisor, of the actual schoolroom work. Our schools will never reach a creditable standard of efficiency so long as superintendents are content to remain in their offices, sending out examination questions, receiving and examining reports, tabulating and comparing statistics. These things have their value, but they are of secondary importance to schoolroom visitation and the friendly criticisms and suggestions that result from such visits. By the systematic visitation of his schools the superintendent learns the real difficulties of the teachers, becomes acquainted with the strength and weakness of the teaching force, ascertains the merit and weaknesses of his own plans when put to the test, thereby learning whether it is best to insist on their enforcement or have them returned to his office for repairs. It has been my experience that some of my most cherished plans have failed when subjected to the actual test. In many instances I would have thought the failure was due to the teacher, if I had not been present to see for myself that the plans were vitally defective.

Again, the supervisor gets quite as much from his teachers as he gives them in return. He cannot hope to keep abreast the times unless he is acquainted with the best things in his profession, as exemplified by the best thought and practice of his teaching force.

I like the position taken by both speakers in reference to the supervisor as a critic—

that he should be a friendly critic, that his criticisms should be suggestive and, so far as possible, constructive. But few things are more embarrassing and discouraging, yes, hurtful, to teachers than harsh, unsympathetic, destructive criticism; while, on the other hand, nothing is more encouraging and helpful than friendly, sympathetic, constructive criticism. Teachers, as a rule, are criticised quite enough; what is needed is a better and higher form of criticism.

One point that, perhaps, has not received sufficient consideration in this discussion is the relation of the supervisor to the public. He should understand, not only the theoretical and practical workings of the schools under his care, and be able to criticise, advise, and instruct teachers; but he should be a man of affairs, thoroughly in touch with the professional and business men of the community, understanding the tastes, prejudices, and needs of the people, so that the schools may be the better suited to the environment, may the most nearly meet the needs of the people who support them. But, in order that the schools may not become warped and stunted by local influences, the supervisor should have a clear and comprehensive view of the age and civilization in which he lives. He should have an understanding of and a sympathy with American life and institutions. And, while he should welcome truth and light from whatever source they may come, yet he should not disparage and despise the educational achievements of his own countrymen, nor think that there are no true pedagogical principles except those which have been formulated around a lager-beer table in Germany.

Lastly, Mr. President, I cannot conclude this discussion without calling special attention to Mr. Jones' classic sentences in reference to the supervisor as the inspirer of higher ideals. "It is," says he, "in the sphere of ideals that the influence of the supervisor, if he be capable, is of supremest worth. Ideals of education must be developed in the minds of teachers, so as to inspire to highest and noblest effort. The ideals must express the hope of the future and cast such radiance over the plain path of common teaching as shall make it seem the very way of salvation to pupils and teachers alike." Such, in my opinion, is the highest service that a mortal can render his fellows. By a change of ideals, Saul of Tarsus became the apostle of the Gentiles. By a change of ideals, Sir Launfal saw the leper transformed into the Savior, and stand before him

Shining and tall and fair and straight
As the pillar that stood by the Beautiful Gate.

By climbing from the low plains of common life up to the mountain top, the three disciples saw the Son of Man transfigured into the very God.

But we cannot inspire higher ideals in others unless we first possess them ourselves. The electric globe does not send its radiance abroad unless there is heat and light within. We grow into what we would like to be. By contemplating the Great Stone Face, Ernest came to resemble it in the benignity of features and goodness of heart. So, if we would inspire higher ideals in our teachers, we must not worship the golden calf of our own making, but pay our devotions to the perfect ideal.

It has been wisely said that every noble art has its divine counterpart, and I wish you to note that teaching is no exception. "God formed and modeled the world out of chaos, and that is sculpture. He builded the mountains, with their domes and spires and minarets, and that is architecture. He carpeted the earth and tinted the seas and hung the 'bow of promise' in the heavens, and that is painting. He made the birds and the winds and the waterfalls, and that is music. He peopled the earth with human beings, and that is the everlasting drama. But when He wanted the perfect teachers, He sent His Son from heaven."

MISS SARAH L. ARNOLD, Boston, Mass. — It seems to me that it is not only our duty, but our privilege, and, furthermore, our necessity, to make these conferences as frequent as practical. The danger line lies in the necessity which takes us out of our own school-

room, and our danger line is this that we are apt to get away from each other, and that, therefore, these conferences are necessary. But unhappily in the city schools, where the supervision must be divided, it becomes absolutely necessary for us to substitute another kind of conference, but which does not by any means take the place of the present conference. I cannot speak with assurance upon this subject, because I have come to learn that the conditions must be modified according to the surrounding circumstances. It is a duty to study the individual teacher as well as to study the individual pupil. A flash light has very often been cast upon my work by some child in which I was interested; once by a small boy, aged six. He was very fond of a little girl named Dorothy, and guarded her very carefully. One day he was taken sick with chicken-pox, and during his illness a little neighbor, Mark, stepped in and took Dorothy from him. When the child recovered he threatened to thrash Mark, as he expressed it. When Christmas came, his mother insisted that he should invite this little boy, Mark, to his Christmas tree. He reluctantly did so. He put on his muffler and overcoat, and thus bundled he waded through the snow slowly, and, when he arrived at the child's house, he said: "My mother told me to tell you to come over and visit my Christmas tree, but if you come I'll punch your head." Outward compliance; inward defiance. I believe that when we command the presence of our teachers at numerous meetings we are in the condition of the mother who commanded her small boy. It should not be a habeus corpus act. The beginning of our circulars should be "Whosoever will, let him come."

SUPERINTENDENT FRANK B. COOPER, Des Moines, Ia.—I do not believe complaint from the teacher in service is so general as we might be led to believe from the papers presented. I am quite sure that it was not so intended by the reader of the paper. I address myself to but one or two points in the paper. In considering the papers I was led to notice the parallelism that runs between the relation of the teacher to the school and the relation of the superintendent to his teachers. The good teacher or the good school represents a democracy. The school is not the teacher's. It belongs to all. It is the children's as well as the teacher's, and I believe that these papers that have been presented show that the dictatorship has passed away. The school is a thing of joint ownership, and so is the school system. Both Superintendent Jones and Miss Brooks brought out the idea of joint work, joint study of children, joint examination of papers, joint teaching. In the schoolroom the teacher proposes something to do. She secures the co-operation of the children in doing that. By her art there prevails an atmosphere of good will. A wise plan properly presented is necessary, for the perfect fulfillment of which sympathy must enter in, and that rests upon knowledge. Unification must come through two channels, the course and the teacher. The most serious mistake is that we expect too much of the teacher, leaving her to work out the development alone, without chart or compass. I once heard Thomas B. Reed say that the opinion of all is greater than the opinion of any. The best thought of all who are thinkers is better and larger than the thought of any one. The proportion of the work to be done in the school system should not be and, to be good, cannot be the work of one mind. Back of the unity of effort lies sympathy of spirit. The course of study, the plan of work, in some sense, should be a joint product. Working together comes by getting together—by conferences.

SUPERINTENDENT F. LOUIS SOLDAN, St. Louis, Mo.—The one quality which I should say a superintendent should possess above all others is appreciation. I mean by it that a superintendent will find, in the first place, that he can learn much more from his teachers than he can teach them; that the quality of appreciation developed in a superintendent will lead in two directions. It will make him admire much that he finds in a large system of schools, and he will pass his judgment with careful criticism. I substitute for child study, teacher study. The application of the critical faculty on the part of the

superintendent is necessary again and again, but it is fraught with danger, and the superintendent who does not know the individuality of a teacher may do harm because he does not know her personally. I should recommend teacher study.

A. E. WINSHIP, Boston, Mass.—One thought has been left unsaid with all that has been so well said this morning. No superintendent's work is a success which makes the teacher self-conscious. I have had some opportunities for watching the work in schools all over this land, and I think the one test of all tests of the superintendent is the spirit of the teacher when the superintendent is present and when he is absent. I wish to bring this one thought from the business side. I notice that successful men see to it that they interfere as little as possible with the people through whom they are working. They give them instruction as far as they can, and if it fails, then they must go. In one of the largest book houses in America a man was employed to introduce a change of books in five prominent cities. Failing in two, he returned to the house, determined to acknowledge his vain efforts and retire; but, as he entered, the chief officer rose and said, "You have made a glorious fight. I have ordered your salary raised." And the man went back and captured the other three cities. It should be the same in spirit with a superintendent when a teacher is fighting her battle. Help her.

THE CORRELATION OF EDUCATIONAL FORCES IN THE COMMUNITY.

BY S. T. DUTTON, SUPERINTENDENT OF SCHOOLS, BROOKLINE, MASS.

The energies of school supervision have hitherto been largely employed in perfecting the organization of teaching and in bringing it into the true pedagogic form. We have treated the school as though it were sufficient unto itself and somewhat independent of all other factors. I believe the time has come when we may wisely give more attention to the utilization of forces outside of the school, to the end that community life and effort may be richer, better directed, more economically employed, and that the schools may gain the commanding position that rightfully belongs to them. Henry Ward Beecher uttered a great truth when he said that, in America, there is not one single element of civilization that is not made to depend in the end upon public opinion. I care not how skillfully and thoroughly school supervision does its work—unless the interest and confidence of the people are enlisted, so that they believe in the value of what is done, much of the labor goes for nothing. There may be much of indifference and apathy, but there is never strict neutrality in public sentiment. A community that is not thoroughly committed to a broad educational policy and active in sustaining it is likely to assume an unfriendly attitude, if the slightest provocation arises. Much energy has been wasted in trying to perfect a school system while the people were ignorant of the motives and aims that animated its directors, and were incapable of understanding and approving the methods employed. There

are plenty of communities that have never yet been reached by the spirit of modern education. They are like those broad stretches of thickly populated country in India or China where, here and there, a single missionary is trying to break the ice of paganism, with scarcely any perceptible success. In such cases the schools are as good as they can be under the circumstances, but there is no enthusiasm concerning them, and the well-to-do people, knowing nothing of their excellences, send their children to private schools, often of an inferior character. There are many instances where the conditions are right for the development of an educational spirit in the community, but those in charge make no effort whatever to bring about this most-desired end. Some years ago a young man was called to take charge of a group of schools in one of our pleasant New England boroughs. He had his own ideas and carried them out. He made no study of the community to see what synthesis could be made of existing forces. He enjoyed the privacy of his own room better than the exactions of social life. He made few acquaintances, and few people knew him or cared for him. At length a single indiscretion on his part in connection with a case of discipline aroused the hostility of the local newspaper. Having no public opinion in his favor, he lost ground rapidly, was soon compelled to resign, and the good work he had done in the school went for nothing. I venture to assert that this is a type of many cases, occurring all over the country, which give to educational supervision the character of instability and Bohemianism.

Moreover, the failure to work constructively for healthy public opinion is not the only shortcoming of our craft. The apparent inability of some men and women to recognize the unity of all moral and social aims, and to justly value the work of forces other than the one to the service of which they are especially committed, is a difficulty no less serious than the one already indicated. Herbert Spencer, in one of the closing chapters of his work on "*Illustrations of Universal Progress*," calls attention to the fact that "The different parts of the social organism, like the different parts of an individual organism, compete for nutriment, and severally obtain more or less of it according as they are discharging more or less of duty." Unless the several agencies which operate in community life for the improvement of the conditions of living and the elevation of society are made conscious of each other's claims, this sort of competition, to which reference has been made, is likely to work harm in preventing some forces from achieving all of which they are capable.

Let us consider briefly the principal factors that, speaking broadly, contribute to education in the community. They are the church, the home, the school, the public library, the newspaper, the art museum — where there is one — and the civil state, with its laws protecting life and property, its provision for public health and convenience, and its orderly

conduct of all civic affairs. We should mention, also, the opportunity of hearing good music, the operations of commerce, the daily miracles of science, as applied in mechanics and electricity, securing rapid travel, communication, etc. Now, in the general work of education each of these forces has its own peculiar task. It does what none of the other forces can do. The church, by its constant appeals to the higher spiritual nature, by consecrated self-denial, lofty example, and helpful ministrations, must be regarded as an important educational factor. The presence all over the Christian world of imposing church edifices conceived in the highest types of architectural art, with their towers pointing upwards, are simply the visible expression of those deeper sentiments that are inspired and developed through the ministry of the church.

The home, with its tender parental nurture, its solicitous care and wise guidance, contributes a fundamental element to education. Especially is it true, when an air of culture pervades the home, that it often becomes, as Holland describes it, "the sweetest type of heaven." What it does, no other power can do. Deprive a child of a good home, and you blast the very flower of his opportunities. It was observed in connection with a series of articles by eminent persons published a few years since on "How I Was Educated" that each and every writer paid a high tribute to the potency of the home as a factor in his own education.

The school holds a central place. More than the church, or even the home, it moralizes the child and establishes his character upon the foundations of good habits. Its regular routine, continued day after day, and the constant appeals made to the best efforts of the child, make the school pre-eminent among educational forces.

The public library—or people's university, as it has been called—is a reservoir of knowledge and inspiration for the entire community. Rightly supported by the church, the home, and the school, it supplements them all in their efforts to elevate and refine society. Without speaking in detail of other educational forces, it seems strange that devotees of any of these agencies are blind to the relative importance of the others, as well as to the fact that the highest success of any one of them depends upon the support it gets from the others.

I shall venture to refer again to the church in this connection, in the way of mild criticism. Mr. Brooks Adams, in a recent monograph on "The Law of Civilization and Decay," finds that the fundamental idea in religion is fear, "which, by stimulating the imagination, creates the belief in an invisible world and ultimately develops a priesthood." To such an extent have the world religions taken advantage of this principle that their history has been a record of tyranny and darkness. Under the same influence the light of Christianity became so obscured that the work of freeing the human mind from its slavery has been only partially

begun; and, even in this most democratic of countries, whose foundations were laid by those seeking religious freedom, we often find the church arrogating to itself rights and powers which it does not possess, and pretending to accomplish results which it never has nor ever will accomplish. The minister too often forgets that the pulpit is a means to an end, and that its highest function is to dignify and sweeten human service of every sort, and establish the brotherhood of man and the unity of all work for the cause of truth, to the end that there may be mutual co-operation. Only recently one of our most liberal-minded clergymen, in naming to a body of young people the benefits that have come through the Christian dispensation, made no mention of the Christian school. Too often schools are entirely omitted in prayers, from the pulpit or in pastoral ministrations. It is because of the influential position of the church that I feel compelled to emphasize this omission. It seems to me to be entirely opposed to the spirit of Him who came upon earth and went about doing good. The love of the Master for children is unquestioned. I have often thought that were He to be among us again, He would be seen quite as often in our schools as in our churches.

No less, lack of co-operation has often existed between the home and the school. Here are two forces operating to the same end, yet often so antagonistic that the impressible child is trained in ways of discourtesy and disloyalty, his school life is made wretched, and his childhood is clouded. Dissension in the home is bad enough, but strife between teacher and parent is fatal to those finer results for which the home and school should aim. Is it not about time that the traditional schism between parent and teacher be bridged over? Should we be contented with the relation of armed neutrality which so often exists? The importance of the issue at stake demands mutual sympathy and co-operation. The teacher greatly needs the respect, the confidence, and the esteem of the parent. He needs information concerning the child's home life, his tastes, habits, etc. The parent, on the other hand, should have the frankest statements from the teacher concerning the child's interests, as displayed in the schoolroom. Through such conference teacher and parent are able to supplement the efforts of each other.

There is something to be said about the place the schools should hold in the opinions and good wishes of the people. As the most influential of the forces in education, as the prime factor in determining the civic intelligence of the community, they should be held in high honor and esteem. They should be regarded with generous feeling and interest, and every citizen should feel a personal obligation to contribute to their efficiency. The late President Garfield once said that "the best system of education is that which draws its chief support from the voluntary effort of the community." It is worth a good deal to have the school taxes paid cheerfully,

but we want something more than a passive interest. This brings me to the point of announcing two principles that deserve to be recognized everywhere. First, the social and educational forces of the community should be brought into correlation. There should be the fullest mutual readiness to co-operate. Second, the school, better than any other factor, may become a center for this correlation. It exists for all the people, is unhampered by creed or sect, and at the same time stands for the very highest aims to which human efforts can be directed. In an article written for the *Atlantic Monthly* of January, 1896, Horace E. Scudder urges the propriety of making the schoolhouse the center of community life, and concludes by declaring that the school system holds the key to the situation in any problem we may encounter when considering the momentous subject of American civilization. There is little that is new in these propositions. Indeed, there has been a growing recognition of their importance during the last few years. The so-called institutional church is an attempt to utilize various educational forces, to supplement preaching, so that now we often find organized under the roof of one church various means for physical, intellectual, and moral cultivation. The same idea expresses itself in missionary endeavor, but the most significant illustrations are those local societies that have been formed in various cities with the avowed purpose of helping on the cause of education. Some years ago the Public Education Society of Philadelphia began a career which has resulted in many educational reforms. In fact, it is said that the establishment of the kindergarten, the reorganization of the school system with the employment of a superintendent of schools, the introduction of manual training, and the broadening of all courses of study, have been the indirect results of the labors of this society. A similar organization in New York has enlisted the active assistance of the influential citizens of the city, some of whom are social leaders. What appeared to many to be almost a hopeless undertaking has already borne excellent fruit in the well-known reform measures which it is to be hoped are the beginning of a thorough reformation of the school system of that city. A striking instance of what a local society may do is seen in the work accomplished for the Boston schools in a single year by the Association of Collegiate Alumnæ, acting in co-operation with the officers of the Institute of Technology and certain school officials. There was undertaken a thorough investigation of the schoolhouses of Boston, to determine their condition with respect to health and sanitation. A vigorous report made at the conclusion of this task has resulted in a thorough awakening of public interest on this subject, and will ultimately result in larger appropriations for the correction of defects pointed out.

One of the best illustrations of social co-ordination is seen in the Twentieth Century Club of Boston, which has been in existence a little

more than three years. The avowed purpose of the club is "to promote a finer public spirit and a better social order." Among its founders were such men as Philips Brooks, Edward Everett Hale, and George A. Gordon. Its membership of 300 includes about an equal representation of lawyers, ministers, journalists, artists, teachers, and business men. Among these are many names well known as philanthropists and social reformers. Under the skillful management of its president, Edwin D. Mead, its meetings, which are held on alternate Wednesday evenings, have presented a remarkable instance of a perfectly free platform, where any subject, social, religious, or political, could be discussed with the utmost candor and in the best spirit. A lunch is served to the members of the club at its rooms on Saturday, after which some topic of living interest is brought forward, and a most interesting comparison of views follows. It is generally recognized by the members of the club that its purposes are distinctly educational, and the interests of schools and colleges have been given a prominent place in its deliberations. It is impossible to estimate the good that such an organization may accomplish. The fact that woman's clubs throughout the country are making public schools a special object of study, and that at Louisville last May the federation passed resolutions recommending such study, is full of significance and promise.

In response to request, I will now speak particularly of the purposes and work of the Brookline Education Society. The inhabitants of Brookline are widely scattered, and are not especially homogeneous. The town, territorially, is a part of Boston, and is nearly surrounded by that city. As in the case of ancient Rome, all the tram lines lead toward the city, and the several parts of the town are not connected by public conveyance. It is a community where, previous to a few years ago, the well-to-do people patronized private schools, of which there were excellent examples both in the town and just across the city line. Hence, Brookline cannot be regarded as a place to be easily organized with public education as a center aim. The high intelligence of the people and their generous public spirit of course favored such an attempt. The public schools for several years have been conducted with special reference to the union of the home and school. Parents have been taken into consultation upon every possible occasion, have been invited to co-operate, and the course of study and the school life have been made both acceptable and attractive. There was plenty of conservatism to overcome, and the customary hankering after the leeks and onions of the old régime. All this has largely been overcome by the dictum oft repeated, until it was at the tongue's end of every teacher, that the aim of the school was moral character building, and that nothing could serve this end but a broad, elastic curriculum, entirely free from quantitative standards. It was the recognition of the validity of these aims, as seen in actual results, that

did more than anything else to help on the Education Society. It was fortunate from the start in having social leaders among its officers and active members. The society has been in existence less than two years, and has a membership of more than 500. Its purpose, as announced in the constitution, is "to promote a better knowledge of the science of education, a better understanding of methods now employed, and a closer sympathy and co-operation between the home and the school." It holds regular meetings once in six weeks, with such special meetings as the officers may think desirable. All arrangements of programs, etc., are made by the Executive Committee of seven persons, including the president and the secretary. Pains has been taken to offer for discussion at the regular meetings those vital questions that lie between the home life and the school life, such as "The Home Care of Children," "Home Study," "The Reading of Our Boys and Girls," "Works of Art in Schools," "The Study of Nature in the Home and in the School," "Manual Training," "Domestic Arts," etc. In almost every discussion the conclusion has been reached that the home and the school must be in accord, and that the child, in passing from one to the other, should be in the same atmosphere of kindly sympathy and wise guidance, and that there should be agreement between parents and teachers in regard to sports, companions, books, and all other elements that enter into his life. There are special committees on child study, physical training, history, science, music, art, school libraries, and lectures. Any member of the society may become an associate member of one or more of the committees and find an opportunity of rendering service therein. The Child Study Committee has encouraged the holding of mothers' meetings in all sections of the town in connection with the kindergarten and primary schools. A general meeting of this sort was held in the autumn, which was attended by no less than 400 persons. Several syllabi, less abstruse and searching, perhaps, than some prepared by professional students of childhood, have been sent out.

The Committee on Physical Training has given much attention to the best methods of promoting health in the home and the school, and has still a long list of problems for future consideration. The erection by the town during the past year of a fine municipal bathhouse, with superb facilities for swimming, adjacent to the high school, has given occasion to this committee to consider swimming a proper school exercise. An instructor has already been secured, and a programme arranged for giving systematic lessons in swimming to pupils in the high and grammar schools.

The Committee on History has undertaken several lines of work that are likely to make this study of much greater value than has been the case hitherto. Acting in connection with the public library, a collection

of old letters and documents of value has been begun. Several tracts of information concerning old houses, historic roads, and Indian trails have been issued. Monographs upon Brookline's share in the Civil War and other important events have been written by pupils in the high school. Bulletins giving directions for excursions to historical localities in and about Boston have been issued. An afternoon course of lectures upon local history in the Civil War was given last winter, to which all children in the town twelve years old and upwards, their teachers and parents, were invited. Among the speakers were William Lloyd Garrison, Edward Everett Hale, Edwin D. Mead, and Charles Carleton Coffin. The lecture given by the last-named gentleman was his last public address. The committee has placed letter-file envelopes and boxes in the high and grammar schools for the collection of newspaper items. Several things are being planned for the current year, among them a course of illustrated lectures on general history.

The Committee on Music has taken an advanced step in the direction of enabling young children, especially in the less favored sections, to hear fine music. Several excellent amateur musicians have, upon invitation of the School Committee and with the approval of the school board, gone into the schools and given a half hour, of vocal or instrumental music. It is hoped that this plan may be so well developed that once each week the younger pupils will be able to hear music of a high order. The committee has taken the ground that this is not done to entertain the children, but in order that the higher æsthetic nature may receive proper nutrition during that period of life when the child is impressible and receptive. They believe with Bulwer Lytton that music once admitted to the soul becomes a sort of spirit and never dies. Those persons who have had the pleasure of witnessing the effect of this experiment have become strongly convinced of its wisdom.

The work of introducing masterpieces of art into the schools was begun some years since by Mr. William H. Lincoln, Chairman of the School Committee, who placed in the assembly hall of one of the grammar schools, which had been suitably frescoed in dark, rich tints, a large portion of the frieze from the Parthenon and copies of several of the most famous heroic statues and casts. Local committees and the patrons of the schools in the favored sections of the town have continued this work successfully. Art works to the value of about \$5,000 have already been donated to the Brookline schools. The Art Committee of the Education Society is about to undertake the introduction of pictures and objects of art into those school buildings whose patrons are unable to contribute to this purpose. It should be stated that considerable progress has been made in correlating pictures with the grade work of the several classes. Steps have been taken to organize a loan collection of pictures and objects of art, both for the

sake of the people at large and in order that funds may be raised for the prosecution of the work mentioned above.

The report of the Science Committee, as published in the first year-book, is rich in suggestions looking to the home as the partner of the school in making children intelligently familiar, not only with superficial nature, but with the scientific aspects of our civilization which touch us on every side. Many parents have already become students of science with their children, and have helped them to fit up small laboratories at home for simple experimentation. It is proposed by the same committee that a "science museum be established for the reception and preservation of curios, mementoes of foreign countries, lantern slides of people, cities, and objects of interest in far-away lands, as well as of noble mountains, majestic rivers, and yawning cañons of our own country."

The School Library Committee has prepared a valuable annotated list of books on each subject taught in the primary and grammar grades. These books are all in the public library, and the shelf numbers are given to enable the children to call for the books that interest them.

Two courses of lectures have been given on the broader educational themes. However valuable these lectures may have been during the early days of the society, it is doubtful if they will be regarded as an important part of its future work.

It may confidently be stated that the Education Society has already borne fruit. The attention of many people hitherto quite ignorant of educational problems has been turned in this direction. Parents have come to see, perhaps for the first time, that the education of their children is a deeper concern than houses and lands or the stock market. That type of man who journeyed ten miles every week to see a favorite colt in the pasture and who never visited his children's school is likely to become extinct. A powerful public sentiment is being developed in favor of the newer phases of education, especially art, manual training, and physical culture. During the past year the school yards and grounds have been placed in charge of the Park Commission, which has already planted shrubs and flowers in nearly all of them. I suspect that this move was but an indirect result of the Education Society. The suggestion for an art commission made to the town authorities, and which has already received favorable attention, is traceable to the same source. Various objects, useful and ornamental, have recently found their way from the homes into the schoolrooms, such as plants, collections of shells and minerals, photographs, etchings, casts, magazines, books, and best of all is the unqualified sympathy that is now apparent between the parents and the teachers. Some teachers receive so many grateful and complimentary letters that their faces are constantly wreathed with smiles, and they seem

to be walking on air instead of performing a wearisome duty. When criticisms are made, they are offered with such courtesy and consideration that one cannot help feeling thankful for them. So, when streams of appreciation and kindness flow in continually upon the superintendent and his associates, what under some circumstances would be dreary routine becomes delightful service.

Did time permit me I would like to speak in detail of the work in the direction of high-school extension which has been successfully carried on by the head master of the high school. Courses of lectures and lessons in literature, astronomy, French history, history of art, and popular science have been provided during the past four years, and have met with the heartiest approval from all classes. Just now a course of lectures on economics is being given, the expenses of which are provided for by a distinguished citizen. Let it be understood that no stress is laid upon the name of the society or of the particular methods just described. It is the idea that must be emphasized. Every community has its own peculiar conditions, requiring special adaptations of means to end.

Although this paper is somewhat disconnected, it requires but little summing up. I am pleading for co-operation in community life, and this word expresses the one thought I desire to impress. President Eliot, at the close of twenty-five years as president of Harvard University, when asked what had been his leading aim, replied, "To secure co-operation." There is no word in our language more highly charged with what is vital to human destiny. St. Paul the apostle pleaded for it. The warp and woof of what we call modern civilization are made up of co-operation. We want far more of industrial co-operation, of religious co-operation, and of educational co-operation. The mission of the public school is closely related to all forms of social work. The methods found most successful in dealing with the defective, the vicious, and the neglected classes are such as have been tried advantageously in the school. On the other hand, the methods, aims, and humanitarian spirit of the social reformer are essential to the life of every good school. Hence it is readily seen that school supervision has something more to do than to grade classes, prepare courses of study, and to see that principles of teaching are carried out. Teachers must become conscious of the commanding importance of the school as a social factor, influencing every form of human endeavor, reflecting its spirit and aims in the life and conduct of the people, and, in turn, drawing inspiration and help from every department of the world's activity.

RELATIONS OF CITIZENS AND TEACHERS.

BY MISS IDA C. BENDER, SUPERVISOR OF PRIMARY WORK, BUFFALO, N. Y.

The temptation is strong to add to the record given by Mr. Dutton a somewhat extended account of similar work which is going on today in a conservative city at the eastern end of Lake Erie, a city which I trust has not entirely passed from the recollection of many here present. The hour is so late, however, that I will merely mention the work of the Buffalo School Association, of the Liberal and Independent Clubs—sources from which the thoughts presented this morning have chiefly been drawn.

The review of social agencies presented by Mr. Dutton this morning has a profound meaning for every thoughtful teacher. It brings to mind the wonderful discoveries of science and their application in practical life, which have caused a revolution in industry and a development of commerce difficult to describe in moderate language. Splendid as these triumphs have been, there is ample ground for the belief that in the dawning century achievements far transcending them in grandeur and utility will be the common lot of men.

But we turn from the spectacle of these material triumphs to survey, somewhat minutely, their effect upon our social and political life. What old conditions have been modified or transformed? What new influences called into being? What strange and hitherto unsuspected dangers developed? What new hopes and new fears born?

No one is able with absolute justice to estimate the character of the society of which he forms an active part; yet it is also true that no adequate understanding of his work can be the possession of the American teacher who fails to review the social and political development of his country, in order that by so doing he may gain at least some glimmer of truth and law by which to interpret the present and prepare for the future; who does not pause to ask himself what it means to be a citizen of these United States, A. D. 1897. For in no country have social and industrial changes occurred to a greater extent than in our own land.

"It is probable," says Lecky, "that no nation ever started on its career with a larger proportion of strong characters or a higher level of moral conviction than the English colonies of North America. In that early society, of which we may take the New England colonies as the dominant type, the social elements were comparatively few and simple. We call to mind a homogeneous population, narrow, austere, democratic, displaying a deep consciousness of individual and civic responsibility, developing strength and unity through the common struggle against

dangers from without and the battle to overcome the unfriendly forces of nature near at hand." The conviction that the "preservation of liberty depends upon the intelligence of the whole people" early prevailed, and the American common school had its birth.

This school, supported entirely by the people of the district, stood, almost to the same degree as the church, as the center of public interest. The common people had a profound belief in their ability to manage its affairs. Certain evils, local jealousies, without doubt resulted from this faith, but there also grew out of it a keen sense of civic duty and a remarkable capacity for dealing successfully with public questions of the most vital importance to the nation. What a training school for citizenship! This district school was before the tide of population set so strongly toward the cities, carrying with it the more vigorous and progressive of the people! In its palmy days, how it touched the life of the whole community! Think of the teachers in these schools! Ambitious, of the best blood, closely bound up with the common welfare, they carried from household to household the influences of their brave, young manhood and womanhood, the moral stimulation of their hopes and ideals, and aided immensely in establishing a true democracy of intellect and character. Open to grave criticism as to methods, sadly deficient in equipment, ludicrously wanting in those refinements of administration which are now our special boast and pride, this early school nevertheless came far nearer a realization of that ideal so graphically sketched by Mr. Dutton than do many of our schools of today. Not only could it truly be said "As the teacher, so the school," but even more, "As the school, so the community."

But the passing years have wrought great changes. From a people of less than 4,000,000 we have grown into a nation of 70,000,000. Then our scattered settlements occupied a narrow strip of seacoast; now we have planted our cities and extended our homes over an empire of 3,000,000 square miles. Every country of the civilized world and many of the uncivilized have contributed of their blood to swell the current of life within our body politic. Wealth has greatly accumulated, power has enormously increased. Hardship and privation have given place to luxury among a large proportion of the population. For simple modes of life, the conventionalities and refinements of an aristocratic and artificial society have been substituted. In flash-light picture we see the tea party and "social" replaced by a Bradley-Martin ball; the lyceum, by the evening banquet of three hours' duration, with the after-dinner consideration of the gravest questions of public policy.

Coincident with these great changes new dangers have arisen, for the accumulation of wealth has been in the hands of the few, not distributed among the many; the industrial conquests which we are wont to count

among the crowning glories of our civilization may have been gained at the expense of the efficiency of the individual now condemned to the "dreary monotony of some small detail in the vast machinery of industry." Universal suffrage has been won through the sacrifices of blood and brawn. Universal education has been established. But have these precious possessions made all men "free in thought, pure in motive, patriotic in act"? Must we look far afield to find instances of the surrender of individual conscience at the behest of the political "boss"? Does the conduct of public affairs in our great cities always illustrate the principle that "municipal government is business, not politics," using that term in its narrow and ignoble sense? Do all men who in their private dealings are above reproach hesitate to enrich themselves at the public expense?

Is the teacher under any moral obligation to find an answer to questions of this nature? Is he in any sense responsible for the character of that answer? What aid is he giving in combating evils, if they exist? In reviewing and strengthening old virtues? Has the pupil, who tomorrow takes his place in the world, a citizen, learned that conditions which favor the development of grave dangers, *viz.*, the concentration of a vast population within a limited area, the combinations of social and industrial agencies, a press, powerful to mold and to reflect public opinion, that all these are forces to be marshaled on the side of right and the public good? In fine, has the teacher maintained the position he once held in influencing the social and political well-being of the community?

From year to year he has allowed himself to be removed further from the life of the common people, until he has become a part of a great machine. In the world the warring social elements have engaged in constantly increasing strife, but his isolation has even become more complete. The great world has known little about his work and has seemed to care less. The little it has known is gained through the children, always a most powerful influence, but not always an equally reliable source of information. Even this connecting link has been wanting in drawing him into relations with that rapidly growing class in American life which has no children to identify its interests with those of the common school.

Thoughtful people, however, are beginning to realize that this separation between life and school can no longer be safely endured. Whether they will or not, the citizen, representing the world, and the teacher, the school, must again be brought into that close relation of sympathy and co-operation referred to by the previous speaker.

Poor citizen! In all the varying aspects of the case he has bravely and patiently performed at least one function. Directly or indirectly, he has paid the bills! Satisfied that when this duty was done his responsibility ended, he has grown careless and indifferent about the welfare of

the school. At last he is being brought into an attitude of attention and interest—what wonder that he betrays ignorance regarding modern advances in education and manifests a strong prejudice in favor of the ideals and methods in vogue in his youth! Life has crowned him with some success, so we find him conservative. He is honest, but rather obstinate; an individual of importance in his community, he feels that his opinions should carry weight. So he expresses these opinions, the essence of conservatism, with greater or less vehemence, through the press, the pulpit, during the daily round of his practice, or among his associates of the office or the shop.

This is the man who must be won over to the view that the school has a higher, nobler, more vitally important work to do than the bare teaching of the three R's—a work not inconsistent with successful instruction in the three R's, on the contrary, making that immensely more thorough and effective.

Untiring patience, infinite tact, calm judgment, a serene temper, are needed to change this man's feeling towards education and to convince him that the school has another, and perhaps greater, claim upon him than the payment of a tax. But he is well worth the effort, this typical, conservative citizen, who forms the largest and best part of every American community. What folly it is to try to *force* upon such a man the immediate acceptance of all the commendable features of the new education, which is not so new after all! Then think of requiring him to sanction some of the vagaries that masquerade under that title! Consider the harm that will surely be done to the cause which seeks to bind home, school, and the world into one blessed union, for the upbuilding of individual character and worth and the service of the state, by an inundation of the town with circulars calling for some of the bizarre information collected under the head of child study, or letting loose a local boom in optical goods as the first fruits of a wholesale examination of eyes and ears by experts(?) who last week heard of the Snellen's types for the first time! Not that any careful student of education can be blind to the merits of real child study, or in doubt as to the great rôle it is destined to play in the betterment of education. The pity is that so excellent and profitable a field of inquiry should be so grievously misunderstood. And now there remains for further brief consideration the party of the second part, the teacher.

A day or two ago I ran across a comparison which attracted my attention. It was as follows: In 1870 the number of women teachers in America was 84,047; in 1890 it had increased to 246,166, nearly 200 per cent. During the same period the population grew from 38½ millions to 63 millions, about 79 per cent. Making liberal allowance for the extension of education in the West and the South, and the consequent

demand for a greater number of teachers over and above that resulting from the increase in population, we may gain from these figures some idea, imperfect to be sure, as to the rate at which women are taking the place of men as teachers, especially in the rural schools and the higher positions of city schools. Such a fact should not be overlooked in a discussion of the relations of citizens and teachers. It means that an increasingly large number of teachers is drawn from that class of the population which, in many states, is denied the right of an active participation in public affairs. It means, further, that more and more the training of the future citizen is passing into the hands of persons, the ordinary course and tendency of whose life are away from, rather than toward, an intimate knowledge of and sympathy with public life and civic duty; who, too often for the safety of the state, fail to catch the spirit of the time or to appreciate the magnitude of their task; who, instead of fostering and encouraging quite a show of interest on the part of citizens—which Mr. Dutton has described as existing in Brookline—deem any criticism of their work or expression of desire to share in it an unwarrantable intrusion. It is the duty of the hour to recognize these conditions and to seek their remedy. Influences outside of the school are tending toward a better state of things, *e. g.*, the rapid extension of club life for women, the spread of woman suffrage, a more rational treatment of philanthropic questions. These influences would without doubt, even if unaided, bring in the needed reforms; but why wait for the slow process of such a social evolution? Now is the “accepted time” to make teachers feel how closely the personal and individual interests of daily life are intertwined with our governmental relations; to know that in some form government—municipal, state, or national—touches us everywhere and at all times. The penny dropped into the beggar’s hat, the purity of the water we drink, the protection of our homes, the support of our schools, the maintenance of the highways leading to them, the letter upon the desk—these, and a hundred other considerations so necessary to our well-being, bring us into social and governmental relations of far-reaching influence—relations which impose upon all responsibilities that even a child can understand. The study of these relations, the free discussion of social questions, will, I believe, lead to a truer patriotism than an insistence on forms and ceremonies and empty clap-trap. In this study and these discussions both citizens and teachers can and should take part. To my mind the pathway by which to restore the old intimate relation between life and school, and to give it a greater power than ever before, lies here.

One thing, however, needs to be kept in mind: the teacher’s work must not be so exhausting and continuous that all desire to mingle in the life of the community, to be identified with its charities, its social and political reforms, dies because there is neither time nor energy to sustain it.

Thus the teacher, through increased contact with life, co-operating with the citizen in the study and control of social forces, in strong faith in reforms which rest on the force of individual character and a devotion to high ideals of public duty, will speed the day when all men will accept as the standard by which to judge their country nothing lower than this (I quote again from Mr. Lecky): "Its foundation is laid in pure domestic life, in commercial integrity, in a high standard of moral worth and of public spirit, in simple habits, in courage, in uprightness, and a certain soundness and moderation of judgment which spring quite as much from character as from intellect.

"If you would form a wise judgment of the future of a nation, observe carefully whether these qualities are increasing or decaying. Observe especially what qualities count for most in public life. Is character becoming of greater or less importance? Are the men who obtain the highest posts in the community and the nation men of whom, in private life and irrespective of party, competent judges speak with genuine respect? Are they of sincere convictions, consistent lives, indisputable integrity, or are they men who have won their positions by the arts of a demagogue or an intriguer? It is by observing this moral current that you can best cast the horoscope of a nation."

THE PROPER USE OF SCHOOLHOUSES.

BY AARON GOVE, SUPERINTENDENT OF SCHOOLS, DENVER, COLO.

From the beginning the public schoolhouses of the country have been designed and erected for the one purpose of the schooling of the children of the community. So ardent is the faith in common schools that the laws of the land have been framed in such a manner that provision for the education of the children by the erection of houses is mandatory. The people's belief in common schools is emphatically set before the world by their willingness, earnestness, and munificence in the expenditure of money for the erection of buildings. These schoolhouses, often planned and erected with consummate skill—occasionally also with extravagant expenditure—are part of the permanent investments of every village and city in the country. The total amount invested, \$450,000,000, is beyond apprehension. I call the attention of the superintendents to the returns from this investment; and suggest that, without materially increasing the expenditure, the common people may have greater returns. It is the sentiment of the American community that the public purse may be used for the instruction of adults as well as of children. Some

cities already provide free courses of lectures from the funds of the boards of education ; and notably the great state of New York has made material additions in the way of appropriations for apparatus for the illustration of free lectures.

It has been well said that the Protestant churches of the country are of too little service to the builders, because they are closed to the people six-sevenths of the time. While this is not, to so great an extent, true of school buildings, yet they are open for not to exceed six hours a day, five days in the week, for 180 days in the year. If it be profitable to provide instruction for the people by lectures, lyceums, scientific expositions, and discussion, then is it not possible so to plan the school building that this end may be reached without materially increasing the expense to the people ? Also, the democratic character of our government demands frequent and intelligent conversation upon, and public discussion of, the issues that relate to the perpetuity of the nation. Every community requires a meeting place. Churches, for reasons well understood, are limited to religious meetings and allied social gatherings by theological bias and denominational proprietorship. At county seats the courthouse is provided with a public hall, which belongs, as do the schoolhouses, to the people. But the towns wherein are courthouses are so few in number as to be not worthy of consideration at present.

It is usual to construct an assembly room in schoolhouses, commonly at the top of the house, to which access is gained only by climbing flights of stairs, always with embarrassment, and often with risk of accident from fire or other causes. The audience is compelled to pass through some part of the house. This assembly room has for its primary purpose the massing of the pupils of the school in one body for such purposes as belong to school work, including occasional entertainments and exhibitions for the public. When, as is sometimes the case, a social or scientific subject is interesting the people, and the community is hungry for information upon it, and instructors and lecturers are obtainable, the assembly room of a schoolhouse is the most convenient place for public meetings for its discussion or exposition. But it has been found that but few subjects admit of discussion in the schoolhouse. And even in such cases the abuses by the audience, as well as their irresponsibility, are often so great that the school authorities are compelled, after a few experiments, to refuse the opening of the house for other than legitimate school purposes.

Thus it has come about that we have treated our schoolhouse—often the only public building in the community—as quite too sacred for use for popular adult instruction. And in general we have been right in so doing, for a modern schoolroom, so arranged and furnished and decorated as to be a proper and interesting home for pupils, is irrevocably

harmd by allowing a promiscuous audience to occupy it. The furniture is wrenched and twisted and broken; the floor is daubed and littered; the walls are marked and soiled; the ink is spattered; the pictures and decorations, books and apparatus, soon fall into a degraded, dilapidated condition; and pupils' property is appropriated or mutilated. It is imprudent to urge the opening of schoolrooms, save in exceptional cases or with careful preparations therefor, to other than teachers and pupils, for whom they are constructed and maintained. But is it not reasonable and proper so to construct a schoolhouse, and with very little increased cost, as to afford to the people, who pay for it, a literary home, an educational center for adults, including library where possible?

Allow me to illustrate by a community, be it city or village or part of a city, of five thousand people. Five thousand people in the East are compelled to make provision for the seating of a thousand pupils, and in the West and interior, of at least eight hundred pupils. This means a schoolhouse of sixteen rooms, or its equivalent. I am thinking of a schoolhouse in a given village or community, which the people have erected at a cost, by taxation, of, say, \$30,000, which is closed much more than four-fifths of the total hours of active life of any year. It contains schoolrooms furnished for the pupils, and sometimes—more often not—an assembly room or hall, generally up one or two flights of stairs. Now, such a schoolhouse can be so constructed that on the ground floor, with entrance from the street, and without passing through any part of the building, shall be an assembly room capable of seating not less than 200 or more than 300 people. Let us see what the cost of maintaining such an improvement would be. In winter the house is warmed during the day, therefore little extra fuel is required for evening comfort. The lighting is the bare expense of consumption, whether it be oil, gas, or electricity; the care of the room itself; a few dollars added to the pay of the janitor. The construction of the room is of such a character that no respectable audience can harm it or its contents. Instead of school desks are chairs or settees; school apparatus is absent; the wainscoting and flooring are for a public hall. The extra expense to the people for maintaining a room of this kind is very slight. This room belongs to the community; any respectable, peaceable group of people wishing, in the evenings or even during the day, to assemble for the purpose of instruction or rational entertainment is welcome. If a little library has been gathered, it is in or near this room, and open at regular periods for use. The embarrassments in the management of such a room are limited to the decision of the authorities as to what sort of meetings shall be permitted in it. The line would naturally be drawn between instruction and rational entertainment on the one side, and disreputable shows, sectarian religious meetings, and partisan political caucuses on the other. The list

of legitimate uses, about which no question could arise, to which it could be put is a very long one.

My proposition, then, is that the public schoolhouse at present, in the average American community, is not placed sufficiently at the service of the people, and this has come about largely because of our almost fetish-worship of our school buildings. A schoolhouse belongs to the people, is built by the people's money, and ought to be constantly at the people's service for educational purposes.

So far I have spoken only of communities of sufficient size to cause the erection of a large schoolhouse. But the rural schoolhouse also ought to be a meeting place for the people quite as much as the city schoolhouses. Indeed, it usually is the public's social and educational center. But abuses accompany the use akin to the abuses mentioned above. The school building at the crossroads that is used for church services, for town meetings, for political caucuses, being, in fact, the only building in the whole region in which all the neighborhood can assemble, has been so abused as to destroy one of its greatest values in educating children. Some attention to the construction of these buildings, together with added conveniences in the way of movable or adjustable furniture, would make a proper use of the country schoolhouse easy and inexpensive. It would better meet the needs of all the people.

It will not be forgotten that our schoolhouses are closed from two to three months in the year, during the summer vacation. What the present movement toward summer schools will bring forth cannot now be known. But the knowledge of these vacant buildings all over the country, useless for so long a time in summer, must tend to encourage the plan whereby idle boys and girls may have profitable employment for a time during the long vacation, without the expense of preparing quarters for the purpose.

After extended conversations with an architect friend, and certain calculations and planning, I am convinced that the ordinary schoolhouse can be erected with a hall of sufficient seating capacity to accommodate the purpose I have indicated at the expense of not less than 5 per cent. and not over 12 per cent. increase on the total cost. The construction of a large room on the first floor of a building is expensive on account of the increased necessary weight of the walls and foundation for the upper structure. The objections are to me, however, not sufficient to offset the advantages. True, pupils will climb higher to reach a schoolroom, but only a trifle higher. In large portions of the country a part of this meeting room can be lower than the sidewalk, the entrance being even with it. It would be possible even, by using wooden partitions above, so to arrange the building that the expense be not increased at all. An iron beam or a few small iron columns would furnish the necessary support. An estimate of the use to which such a room would be put (over and above the

use of the attic hall), in view of its convenience to the people and the possibility of extended instruction, are measures that deserve consideration.

I know of one large high-school building, planned along this line, where a large assembly hall on the ground floor, on the corner of two streets, with convenient and ample entrances from the sidewalk, furnishes accommodation for a veritable people's university extension. The people have a room of their own, always ready for their use.

DISCUSSION.

SUPERINTENDENT R. H. HALSEY, Binghamton, N. Y.—I desire to call your attention to various forms of co-operation between the school and the community which, in my judgment, have been material helps in bringing about a very much more intimate relationship between the two. What I have to say applies more especially to small cities—those that in New York state we call cities of the third class.

A public school aid society, consisting primarily of teachers, but not necessarily limited to teachers in its membership, has been organized in some cities. The principal purpose for which this society is organized is the assistance of indigent pupils. The rigid enforcement of the compulsory-attendance law in the state of New York has brought more clearly to the teachers' attention many instances of pupils who are unable to attend schools regularly because of a lack of proper clothing. The aid society has undertaken to get funds and clothing from the more fortunate pupils and supply the needs of the indigent. Medical assistance has been furnished through the same agency to pupils whose parents were unable to secure the services of competent physicians. Suffering on the part of those who have defective vision has been relieved by consultation with an oculist. Thus not only is charity bestowed upon those deserving it, but the children experience the pleasure that comes from trying to help the unfortunate, and the school is getting into closer touch with the community because it is the agency through which comes the means from the community for this work.

Educational associations have been formed in various cities, whose membership consists of both teachers and the more thoughtful members of the community not engaged in the work of teaching. Under the direction of these associations systematic attempts have been made to awaken an intelligent interest in the community in the ends and aims of education, as we view them today, and a sympathetic appreciation of improved methods of teaching that are gradually finding their way into the schools. Men prominent in educational circles are invited by these associations to address meetings, to which the citizens are cordially invited. Those who do not attend are likely to hear something of an echo from the meeting through the press. The superintendent finds in these associations a most effectual means of training the general public to an understanding of the ends he is trying to reach in the schools and of the means he is taking to accomplish his purpose. Yet it must be confessed that these associations and the meetings conducted under their auspices affect but a small portion of the community at first, and the progress they make in interesting the general public is so slow that the school authorities have need of a marble patience to await the growth of public sentiment in support of modern methods and progressive schools. Other means must be sought that will more readily appeal to parents who cannot be classed under the head of the more thoughtful members of the community.

Such an agency the state of New York has provided for its schools in the geographical lectures, illustrated by stereopticon views, which it furnishes, with the necessary apparatus, to the schools of all its cities and towns.

If, in addition to the presentation of these views to the pupils, the parents are invited in, they will not fully appreciate the psychological value of the visual training that their children are thus gaining, but they will have a dawning consciousness of the improvement in the methods of studying geography that have been made since their school days, and will thus the more readily sympathize with improvements made in the methods pursued in other branches of the common-school course. For the accomplishment of this most desirable object — the hearty co-operation of parent and teacher — we may perhaps excuse, if not defend, the old-fashioned Friday afternoon rhetorical exercises, in that they certainly lead to the visitation of the school by the parent. Much more satisfactory, however, is the more modern patrons' day observed in many of our schools, where cards of invitation are issued to parents from the teachers, urging their attendance at the school on a certain day, to observe the regular work of the school. And although it would, perhaps, be expecting too much from any teachers living so near the twentieth century as we do to arrange that the work presented on that day should actually be the regular work of the day, and not rather some exercises upon which the pupils had been especially drilled for the occasion, nevertheless the opportunity which is thus afforded for the inspection of school work by the parent, and the subsequent discussion of subjects of interest to both parent and teacher, the free interchange of opinions between them, are of the very highest importance to both.

High-school extension may become a useful factor in a small community for securing the harmonious co-operation of the school and the public. In a western city of less than three thousand inhabitants, where there had been almost no incentives toward a college course, a tide of high-school graduates was at last set flowing toward the university. Many graduates desired to go whose circumstances would not allow them to go. It seemed hard that those who were anxious to secure the advantages of advanced study could secure no assistance toward the accomplishment of their desire. The alumni association of the school took up the matter, and classes were organized in a dozen or more different branches, instructed, so far as possible, by graduates of the school who had had the benefit of a college training. The movement was at first intended for high-school pupils only, but later others were admitted to the classes, so that many operatives in the factories were instructed without cost by these university graduates. The movement was most helpful in making the community feel that its high school was turning out boys and girls who recognized the responsibility that unusual privileges had placed upon them.

It seems to me that a most important factor in the co-ordination of the educational forces of the community must be the superintendent. We were told in the discussion yesterday that the chief duty of the superintendent is to be the professional leader of the teachers. This is true; but it is equally true that the superintendent who conceives that his duties are not much broader than that is one who will not prove the most efficient for the schools under his charge. He must be a man keenly alive to every movement in his community for the advancement of its higher interests; a man who shall seek to enforce upon the people on every suitable occasion the absolute necessity for intelligent co-operation with the school authorities; a man who realizes that the community is educated through very many other avenues than the schools under his charge; a man who, by his judicious attitude, when other interests of the city seemingly conflict with its school interests, has won and has kept the confidence of the people; a man who realizes in fact that "each upward step man's toil-worn foot doth climb is but another birth of God sublime," whether that upward step is within the narrow path of his profession in the discovery of new pedagogical truths, or outside in the broader field of life. Unless the superintendent be such a man as this, we cannot hope to secure an earnest and sympathetic co-operation of the school and community.

We must manage to offer such inducements to the ablest men and women to enter the profession of teaching as will tend to elevate the whole profession. The compensation of the average teacher, whether reckoned in public esteem or in dollars, is entirely inadequate when we consider the preparation required and the importance of the work attempted. There are many of the smaller cities in the country where many a cook receives higher wages than are paid to the average grade teacher. The public will not hold in high esteem that which costs them so little, even if the compensation received were sufficient to warrant the expenditure necessary for an adequate preparation for the work.

E. B. PRUTTYMAN, State Superintendent of Maryland:—We may consider the relation of teachers to citizens under the two heads of (1) their relation to the citizens of the present, and (2) their relation to the citizens of the next generation.

Toward the former it is to be feared that the relation is not what it should be, and there are obvious reasons therefor. The teacher who succeeds is necessarily a student; his office demands, more and more, not only a careful preparation for entrance upon its duties, but continual growth in his profession; his time is occupied in keeping pace with educational progress, and the tendency is to employ all his time out of school in his study, learning, and endeavoring to digest, what comes to him, according to his opportunities in connection with his daily work in school. Perhaps this course is excusable, if not commendable, in the young teacher. But the danger is, lest he become a mere book-worm, that he lose touch with affairs, and thus become more and more narrow and unfit to establish and maintain the relation that should exist between himself and the parents of his pupils, and between himself and his fellow-citizens in general.

The teacher should remember that he is a citizen as well as a teacher; and he cannot expect to interest and influence those about him unless he is an intelligent citizen, keeping pace with the progress of the world, and with public affairs. He should be an all-around man, with knowledge of, and interest in, whatever occupies the thought and attention of other good people. He should be influential in every matter looking to the public welfare, and he cannot be unless he is in intelligent sympathy with the public-spirited, benevolent, and thoughtful public about him.

Whenever the great multitude of those who are engaged in the various divisions of public education are thus equipped and acting together, under the inspiration and guidance of our great leaders, whose best thoughts and sentiments are accessible to us all through the press, their influence will become powerful, not only in the world of thought, but in the world of affairs.

As to the attitude of citizens towards teachers, it seems clear that that is also within the power of teachers to determine. I have no sympathy with the whine that is sometimes heard from a certain class of teachers, that society looks down upon them. If by "society" they mean the ultra-fashionables of the 400 variety, the answer is that the estimation of such society is beneath the contempt of any properly equipped teacher. If the general public is referred to, the assertion is not true. Teachers are esteemed, by all whose opinion is worth considering, according to their real merit, in intelligence, disposition, manners, and character; and those who are worthy, and who act well their part, everywhere earn and receive the esteem and affection which they deserve.

The relation of teachers to the citizens of the next generation is of the utmost importance, and it is the plain duty of every teacher to realize that his pupils must be continually regarded as the coming citizens.

The "reason for being" of a public-school system, supported at the public expense, is that the citizens may be intelligent and of good character. A despotic government may not require for its existence an intelligent citizenship, but in a republic this is a necessity.

The American minister in France during the Revolution, Gouverneur Morris, as he

witnessed the saturnalia of blood and crime, under the sway of the maddened populace, exclaimed, "Thank God that we have no such citizens in America!"

That, notwithstanding the enormous immigration to this country, we have not had to this day any considerable number of such citizens is due very largely to the public-school system, whose chief function is the training of the whole population to intelligent and moral citizenship. The home and the church have like duties; but to all the children of our country the school training is indispensable, and to many the school gives all the training they receive.

Genuine and intelligent patriotism, and the duties of citizens of the Republic, must be systematically taught. The teachers, under the supervision of the members of this department, are the only possible agents that can instruct the future citizens.

It is a hopeful sign that this is recognized, and that at every meeting of educators prominence is given to the discussion of citizenship, and that in the curriculum of every system of public schools are embraced the teaching of civics and the inculcation of patriotism.

No better opportunity could be given to teachers for such instruction than the teaching of the history of our country and the constitution of the United States, including its history, as the result of the experience of the past in government, and including the biography of the immortal framers of the constitution.

The youth must be taught the great aims of government, the great principles which underlie our schemes of government, the development of those principles historically, the sacrifices that have made our present government possible, and the heroic devotion and profound wisdom of its framers.

The constitution of the United States, which is the admiration of all real statesmen in all lands, and the model toward which all peoples are struggling, should be revered by our youth, with knowledge of how it was evolved in the light of the teaching of history.

The history of our own time, as given to us by the newspapers, should be taught in every school.

Every school should be furnished at the public expense, not only with educational journals, but with, at least, one good daily or weekly newspaper. The children should learn daily what is occurring throughout the world—leading events, discoveries, and improvements—and the teachers should not be expected out of their meager salaries to provide the means of information, any more than to furnish the text-books.

As to whether the teachers under their supervisors may be trusted thus to train the citizens of the next generation we should not doubt, notwithstanding temporary disturbances, and notwithstanding occasional intemperate partisanship, and notwithstanding perplexing problems of the present, or any impending dangers.

At the meeting of the National Educational Association in Denver it seems to me that no part of that exceedingly interesting and successful session was so impressive, and even thrilling, as the one devoted to the discussion of "Teaching Patriotism in the Public Schools." After able, eloquent, and patriotic addresses by gentlemen from each section of our great country, the then President, Dr. Nicholas Murray Butler, with his usual discriminating taste, suggested as the proper closing exercise that the congregation should join in singing the immortal hymn "America," and as the vast concourse, representing the teachers and officers of every state of the Union, united in that grand and devout expression of genuine American love of our native land, no one could resist the belief that under the intelligent and enthusiastic guidance of that great company and of those whom they represented, and by the continued blessing of our fathers' God, the Republic is safe.

J. A. SHAWAN, Superintendent of Schools, Columbus, O.—We should not forget that we sit today in the very heart of the old Northwest Territory. One of the provisions of the "Ordinance of 1787" was that the means of education should be forever maintained.

This ordinance is older than the national constitution, and was but prophetic of the educational spirit of the people of this section.

From the time that Eggleston's "Hoosier Schoolmaster" held his famous spelling school in Hoopole township, Posey county, state of Indiana, to the present, the closest relationship has been maintained between the teacher and the citizen. All public entertainments of whatever kind, whether they were the spelling school, the exhibition, the literary society, or the city commencement, have recognized the close relationship between the schools and the people.

Public days, properly observed, may not only benefit the children, but may benefit all who attend them. Thus the schools become what they should be—centers of influence and inspiration for the entire community. A part of most programmes should be devoted to regular class work, so that the citizens may know what the schools are doing.

Many sensitive superintendents and teachers would like to free themselves from the galling influences of public criticism. It is true that criticisms are often ill-humored and unjust, but as long as the schools belong to the public, such things must be expected and borne with as much patience as possible. They usually arise from failure to know what the schools are actually doing. We must take the people into our confidence as fully as possible, and nothing helps more in this direction than to get them to visit the schools and see for themselves what is being attempted and done. At our meeting one year ago, Superintendent Blodgett, of Syracuse, spoke of the wholesome effect of grammar-school commencements. We can testify to similar results in our city. When first introduced in June, 1893, many feared that children would feel their education had been completed, and drop out. Such, however, has not been the result of this arrangement. On the contrary, the opportunity afforded to speak to parents concerning the education of their children was improved, and more have entered the high schools than ever before. Last year 794 were promoted to the high school. Of this number 679 are now in the high schools, *i. e.*, 86 per cent. of the number promoted have entered and are still in the high schools of Columbus.

There is such a thing as removing the schools too far away from the people. We may imitate the German school methods with great profit to our pupils, but the German system can never become the American system. Here the teacher must stand, not as the representative of an arbitrary government, but as the representative of free institutions, to which he and his patrons alike belong.

I believe, however, that the hand of the law should be strong enough to protect the rights of every child who is to become an American citizen. If our institutions are to be preserved by the intelligence and moral training of the rising generation, then each child should be brought under the influence of the American teacher, whether his parents will it or not.

These schools are the standing army of the Republic. Here many of the social battles are to be fought, and the coming citizen should be prepared for his responsibilities as such. Nothing but the most thoughtful and thorough co-operation and sympathy between citizens and teachers can produce the desired results.

WHY ART AND LITERATURE OUGHT TO BE STUDIED IN OUR SCHOOLS.

BY W. T. HARRIS, UNITED STATES COMMISSIONER OF EDUCATION.

All questions relating to the course of study in the schools must be taken, first, into the court that decides on educational values, and, next, into

the court that settles the order of sequence. The former investigates the meaning of the proposed study in the light of civilization, and the latter the place of its introduction into the school programme. The first proceeding is to place the question in the light of all human learning, and the second is to place it in the light of educational psychology.

Our present question, therefore, must be examined with a view to see what art and literature mean in our civilization, what they have meant in the past, and what they must necessarily mean in the future that shall be. Then, having settled its degree of importance, we may turn to educational psychology and ask where in the education of man this can profitably be introduced, what stages of growth it presupposes as already attained, and what methods are best for the results we wish to accomplish.

By the term art I designate sculpture, painting, architecture, and music. By literature I mean chiefly poetry—epic, dramatic, and lyric poetry. I include also such prose writings as critical miscellanies, which furnish reflections on the same general themes that poetry treats. Above all I include the novel, the romance or the story. While the epic poem has for its theme the conflict of nations, the novel treats of conflicts in civil society and in the family, and has been called the epic of the bourgeois.

In order to see what we have to do with in art and literature, let us look for a moment at its place among the fundamental activities of the soul. (Parenthetically I explain that I group together art and literature, under one definition, as the province of æsthetics, and hence I use the pronoun *it* or *its* to refer to them.)

The highest idea man reaches is his thought of the divine as the first principle of the universe. There are three forms in which he attempts to express this idea: First, in religion; second, in art; third, in philosophy. This highest idea appears successively as the good, the beautiful, and the true. We call the effort to celebrate the divine and realize it in good deeds religion; the effort to give visible forms or audible forms to it gives us the various branches of the fine arts and literature; the attempt to explain the world by the divine idea and to comprehend ultimate truth is philosophy. Thus we are to regard art and literature as having the same theme as religion and philosophy. The idea that sculpture and painting, music and poetry, have no other use than amusement must give way to the view which regards them as among the most serious and worthy occupations of the human soul.

All that man does contributes to a revelation of human nature in its entirety, but art and literature lead all other branches of human learning in their capacity to manifest and illustrate the desires and aspirations, the thoughts and deeds, of mankind. Hence the educative value of these things. In the presence of the conflict of moral ideals, the struggle of

passion against what is rational, the attacks of sin and crime on the divine order of the world, all that is deepest in human character is manifested. Art and literature portray these serious collisions; and, like the mountain upheavals that break and tilt up the strata of the crust of the earth and reveal to the geologist the sequence of the formations, from the most primitive to the recent, these artistic situations reveal to all men the successive strata in the evolution of human emotions, ideas, and actions. Thereby the single individual comes to know the springs of action of his fellow-men.

I have already named the four provinces of art—architecture, sculpture, painting, and music; and the three general divisions of poetry—epic, lyric, and dramatic. There are, moreover, three great historical epochs of art and poetry, corresponding to the three great stages of advancement of the nations of the world into conscious freedom. For the art and literature of a people reflect its degree of enlightenment, and are, in fact, next to religion, the chief means by which its civilization is preserved. We, accordingly, have as the lowest stage the art of nations that have reached only the freedom of the social whole, without reflecting it in the individual. The citizen is buried beneath a mass of customs and usages, laws and prescriptions, which he has had no hand in making and yet cannot refuse to obey. This form of civilization is only a little above a condition of slavery for its citizens. Its art, accordingly, does not create forms of free movement, but represents by appropriate symbols the crushing out of individuality. Such is the art of the great nations of Egypt, eastern Asia, East India, Persia, and western Asia. It has been described by Hegel, whose “*Aesthetik*” is by far the most satisfactory philosophy of art, as *symbolic art*. Its works of art adumbrate or hint at what they do not adequately express.

The highest form of art is reached by the so-called classic nations, Greece and Rome. They arrived at the expression of freedom in the body—freedom in its pose and freedom in its action. This is properly called gracefulness. The limbs of the body are obedient to the will of the soul. When the limbs are in the way, when the soul does not know what to do with them, we have awkwardness as a result, and not gracefulness. The Greek artist would not paint a family group with their arms folded, or their hands folded. Their hands and arms would be in action, obedient to some purpose of the soul. But some Dutch painters would show us peasants embarrassed by their limbs, peasants who would evidently feel greatly relieved if their arms could in some way be detached from their bodies—perhaps unscrewed or unhinged in some way and hung up on the hat-rack outside the room, with their overcoats and head covering. Greek art seizes for its theme some moment of life when all the limbs are required to express the purpose of the soul—as, for instance,

in the Apollo Belvedere. So it takes for its theme a sitting figure—the Olympian Zeus; it poses the body in such a way that we see the full control of the will over the limbs. The sitting Zeus could rise instantly and hurl his thunderbolts. The “classic repose” of which we hear is ever a graceful repose—graceful because the whole body is pervaded and controlled by the soul.

The third stage of art is Christian art, or, as Hegel calls it, romantic art, which at first is occupied in showing the superiority of the soul to the body, and for this purpose selects for its subjects examples of steadfastness under severe trial or martyrdom, and, especially, the sufferings of Christ. It goes so far in this as to set itself in opposition to classic art, and sometimes indicates its contempt for gracefulness in order to accentuate its preference for inward freedom and spiritual elevation. It portrays freedom *from* the body, while Greek art shows freedom *in* the body. In the latter development of Christian art we see the attempt to represent gracefulness without losing the expression of the predominance of the inner life of the soul over its corporeal life.

In Fra Angelico's paintings we see Christian martyrs with tortured bodies, but meekness and peace in their faces—a peace that passeth understanding; for they are at one with the divine. There is no longer the expression of the desires of the body, but only the religious longing for spiritual perfection. Classic art showed us the soul in the body, and with bodily desires and passions, but purified by subordination to social restraints. Christian art shows in this first stage the opposite of Greek art—not freedom in the body, but renunciation of the body.

Then there is a second and later phase of romantic art, represented by such as Raphael, Murillo, da Vinci, Michael Angelo, Correggio, Holbein, and Rubens. Gracefulness has been more or less restored by these, but not the classic repose of the Greeks. For there remains even in the latest forms of Christian or romantic art the portrayal of a longing or aspiration of the soul for something beyond what it has achieved.

Here we can pause for a moment and consider the reason for giving the rank of highest phase of art to the Greeks.

We have seen that religion realizes the divine in the good, while philosophy defines it in a highest principle and attempts to explain all things by it; but that art manifests the divine in material forms or, at least, by images of material beings. So that we may say that art is the union of the spiritual and the material, while religion is the emancipation from what is material.

Now classic, or Greek and Roman, art is the perfect realization of this union of the material and spiritual, hence the highest type of art as art. Christian art, representing, as it does, the struggle of the soul against its physical environment, is a form of art that looks towards religion. It is,

therefore, a transition from art to a higher form of the realization of reason, namely, religion. But art is not a mere transitory phase of human culture ; it belongs to all subsequent ages of human history, after it has once come into being. Moreover, the classic form of art will more and more come to be admired in all the future Christian ages, because it portrays freedom in the form of gracefulness. The earliest Christian ages could not admire Greek art without falling back into sensuality. It had not yet attained a persistent hold of the spiritual. But when the Christian idea had been evolved in history to a point where natural science could be pursued in a free and untrammelled manner, then came the age of inventions, labor saving and knowledge extending — inventions that enable us to conquer nature and emancipate ourselves from that drudgery which had been necessary for the sake of food, clothing, and shelter. We are now in this age of productive industry which is the sequel of inductive natural science. We see all about us the triumph of wealth ; wealth in the form of capital enables not only its possessors to obtain large shares of food, clothing, and shelter, and means of access to knowledge, but it enables the unthrifty of the community, to the last man of them, to obtain a proportionately greater share in creature comforts and spiritual privileges. At the beginning of this century the average total production per inhabitant in the United States was only ten cents a day, and, of course, the share of this must have been very small for the poor. But in 1890 the average production had risen to nearly, or quite, fifty cents per day, and the share of all had proportionately increased. .

In the presence of this development of power over nature we desire to see a reflection of our material freedom, and we accordingly gratify ourselves by reproducing Greek art, with its graceful forms. The perennial image of free control of bodily forms pleases us, as it did the Greeks, but it does not excite in us a feeling of worship, as it did in the Greeks. For we worship a transcendent God, one who cannot be fully revealed in graceful forms, like Zeus and Apollo, but who needs religion and philosophy for his revelation. For the Christian civilization needs not merely piety of sense-perception, which is art, but piety of the heart and piety of the intellect. We have varied our spiritual wants, and we have a place for art in our lives as a reflection of our freedom.

Literature and art, in passing over from the classic type to the romantic, become more fully pervaded with the expression of motives and delicate shades of feeling. They show us in a more complete manner the subjective, or inner, life of the individual. In modern art we can see all of the successive stages by which a blind desire in the mind of a hero or a subordinate character becomes at length an emotion, and then a well-reasoned thought, and later on a conviction, and finally an action.

The greatest works of art ought to become the most familiar ones to

the people. Care should be taken, therefore, in the school to select these great works and lead the pupil into an understanding of the motives of their composition, and next to point out the artistic means and devices for the expression of the thought or idea portrayed. For we have said that a work of art is the union of thought and matter. The senses perceive the material object, but a higher faculty of the soul perceives the work of art and enjoys the spiritual suggestion in it.

By successive stages the teacher will carry forward his pupils into an appreciation of the great works of art, and thereby cultivate their taste and make them wise with a knowledge of human nature.

The literary characters painted for us by Homer, Sophocles, Dante, Molière, Shakespeare, and Goethe are better known by the people than any historical characters, and they are thoroughly understood. People learn to do their thinking with them. They furnish keys to our everyday experience. For the great poets have given us characters that are types representing the chief classes of men and women in our civilization. Moreover, the situations in which these typical characters are placed involve the difficult problems of life and furnish their solution. The ambition of Macbeth, the jealousy of Othello, the indulgence in sudden gusts of wrath by Lear, furnish us vicarious experiences of life and widen our knowledge of self. The retribution that overtakes sin and error is seen by us with purifying effect. Aristotle has remarked that this purification through sympathy and terror is one of the chief uses of the drama.

The wrath of Achilles and the selfish pride of Agamemnon; the long-delayed return of Ulysses and the steadfastness of Penelope — the cycles of heroes and heroines of the "Iliad" and "Odyssey" have furnished literary categories for European thought for high three thousand years. They have grown into great ganglia of apperceptive ideas, and everyone has become acquainted with Homer simply to understand the contents of his own literature.

Dante's "Divine Comedy" gives five hundred biographies, foreshortened in the perspective so as to show the life of each sinner or saint as determined for weal or woe by his own deed.

Goethe's "Faust" depicts for us the life of the modern agnostic, who tries to live up to his theory, but finds in the end that the world of human history presupposes the Christian theory of the absolute. God must be a divine reason rather than a blind, persistent force.

What a large family of men and women, heroes and cowards, learned and simple, moral and immoral, Walter Scott has motived in his poems and novels! It is a liberal education to be familiar with his works.

The school readers do not contain these works that I have here named, but they offer fragments of some of them. Moreover, they pre-

pare the way for an understanding of the greatest works by widening the pupil's vocabulary from the merely colloquial one that he brings with him to school, by enriching it with choice selections from Tennyson, Wordsworth, Longfellow, Whittier, Bryant, Carlyle, Emerson, Hawthorne, Swift, Webster, Gray, Campbell, Wolfe, Byron, Shelley, and more than a hundred others.

The pupils of our schools become familiar with at least two hundred felicitous literary works of art, containing expressions of thoughts and feelings that would otherwise remain dumb and unutterable in the pupil's mind. The school must above all see to it that the pupil makes incursions into great works of art in his home reading. He may be led to read "The Merchant of Venice," or "A Midsummer Night's Dream," or some part of the "Iliad," or the "Odyssey," or the "Æneid," or, especially, Walter Scott's "Ivanhoe," or "Rob Roy," and certainly "The Lady of the Lake." Once a taste is formed for a work of the great author, a culture is begun that will go on throughout life.

The photographic art has made possible schoolroom instruction in the great works of architecture, sculpture, and painting. The greatest works should be selected rather than third- and fourth-rate ones. In the Metropolitan Museum of New York city there is a model of the Parthenon, twelve feet long. Mr. Prang, of Boston, has reproduced for us in colors for schools the eastern façade, on which is the pediment group of Phidias, restored by archæologists from the fragments that have been preserved. It shows the scene on Olympus after the birth of the goddess Athena from the brain of Zeus. On the left the god of the Sun is urging his steeds up from the waves; in the east and on the right Selene, the moon, is driving her terror-stricken steeds into the western waves — for day is to ascend into the sky for Athens and night depart. The patron goddess has been born. The three fates spin the thread of life for her; the gods and goddesses of the Attic land turn their heads joyously to the newly born Athena, as Iris hastens towards them with glad tidings. For dignity and repose in action these figures of the Parthenon surpass all art known to us. Taking the Parthenon for one specimen of architecture, add a large photograph of the Cologne cathedral for Christian architecture — all of its lines aspiring towards the heavens and seeming to be supported from above rather than from the earth below.

For painting, let the school get good photographic reproductions of Raphael's Transfiguration, Sistine Madonna, and St. Cecilia; of Holbein's Dresden Madonna; of Correggio's Holy Night, and da Vinci's Last Supper. On stated occasions, say twice a month, explain to the pupils the motives that the artist has depicted in the composition of his pictures — for the composition is the first thing to study in a work of art. The

pupils will become skillful in interpreting pictures after the analysis of a few famous ones from the great masters.

For sculpture, besides the figures on the Parthenon, get photographs of the Apollo Belvedere, the Laocoon, Michael Angelo's Moses, and the Medici marbles, and also of the antique busts of Zeus Otricoli and Hera Ludovisi.

If these photographs of architecture, sculpture, and painting are made to adorn the walls of the schoolroom, they will produce a permanent effect on the pupil's mind in the way of refining his taste, even if no studies are made of the motives that the artist has brought into their composition. But, of course, the composition lessons should be provided for in the programme of every school.

As to music, our high-school pupils learn to perform selections from Mendelssohn, Rossini, Schubert, Mozart, Beethoven, Wagner, and Schumann. There ought to be studies made of the motives of a piece of Beethoven or Wagner, corresponding to those made on Raphael or da Vinci.

It is through this study of the motives of the artist and his use of them in creating what is called the organic unity of his work of art that the pupil can be made to see that art is as serious as history, and even more truthful, as containing a logical consistency in the return of the deed upon the doer.

Art and literature preserve for us the precious moments of elevated insight of those seers who are, next to the religious seers, the greatest teachers of the human race.

ART TEACHING IN SCHOOLS.

BY WILLIAM H. MAXWELL, SUPERINTENDENT OF SCHOOLS, BROOKLYN, N. Y.

For fear of saying the inappropriate thing, I will not do more, and I cannot do less, than to thank Dr. Harris for his address, and more specifically to thank him in that he has brought home to us, and I trust to the whole tribe of drawing teachers, that pictorial representation is not the only fine art that has a right to a place, and that now actually has a place, in the schoolroom. The fine arts have always been represented in the school curriculum. Music, for instance, is a fine art. Music which can, with thrilling truth, reproduce the very essence of the human soul, which can express the tenderest feeling and the most turbulent passion, is the most spiritualistic of the arts, and yet it has conquered its place in the public school. Poetry, the art of arts — the art which is more than

sculpture, more than painting, more than music — has always had a place, and, as we advance in civilization, will have a still larger place, in the public schools. Let not the art enthusiast, who urges us to teach in the public schools what he calls art, forget that the public schools have always taught art. The teacher, every time she teaches her pupils to sing the simplest melody, every time she leads them to appreciate a true poem, is herself a priestess in the temple of art.

Ever since the intellectual triumphs of Athens, painting and sculpture have been classified side by side with architecture, poetry, and music as the fine arts. But, though poetry and music have always been, more or less, in the schools, graphic representation has barely been able to obtain a precarious foothold. Indeed, it is only the thin edge of the wedge that has yet been introduced, for though treasure has been lavished on drawing books and type solids, he would be rash indeed who would call it art to draw geometrical or conventional designs from flat copies, or to make outline drawings of machine-cut blocks of wood. It seems, therefore, that our inquiries must be directed to the determination of three matters :

First — Why should we teach art at all ?

Second — What are the precise purposes we should have in view in teaching art in the schoolroom ?

Third — What are the means by which we may teach art ?

You will please understand, when I speak of art, that I refer to the fine arts as distinguished from the useful arts. Printing is an art, penmanship is an art, mechanical drawing is an art ; but these, and all the other arts, lack something which belongs exclusively to the fine arts. What that something is every soul that is moved with concord of sweet sounds, or is thrilled with the divine harmonies of poetry, will feel, though the definition be difficult, if not impossible. Mr. Ruskin tells us that in an art — any one of the useful arts — the hand and the intelligence must combine to produce the result ; but that in the fine arts there must be a union, not merely of the hand and the intelligence, but a union of the hand, the intelligence, and the heart. As Hegel tells us, art is the idea penetrating matter and transforming it after its own image. Perhaps we may express the matter thus : There are certain divine ideas that underlie nature and underlie life ; the man who grasps these divine ideas with his mind and feels them in his heart and gives them objective representation, either visible or audible, with a view to making others feel them, is the artist ; and the product of his work is art. I use the word art, therefore, as synonymous with fine arts and as distinguished from the useful arts, even though, as in architecture, it is often difficult to distinguish the one from the other.

First, then, arises the question, Why should we teach art in the public schools ? The answer to this question must be found in the answers to two

other questions: What is life, for which education is a preparation? and, What is education? Life, as we see it, says Herbert Spencer, is "the continuous adjustment of internal relations to external relations." In other words, life is the continuous establishment of harmonious relations between man and his environment. Education is the training that brings man into harmonious relations with his environment, partly through knowledge of the exterior world, partly through knowledge of the possessions of the race. Now, beauty in the external world is one of the most priceless gifts of the Creator to humanity; and the interpretation of this beauty by great artists is one of the most priceless legacies each generation leaves to its successors. The great artists—the architects, sculptors, painters, poets—have interpreted for us the beauties of the external world and the beauties of the human soul in moments of repose and moments of passion, in seasons of noble exertion and seasons of heroic self-sacrifice. Through the work of the artist, through the study of art, it is that we learn to appreciate the beauties of life and the beauties of nature. The world waited long for a Scott to unfold the beauties of the Highland, and an Irving to discover the scenery of the Hudson. True it is that every human soul is born with some inherited power of appreciating the beautiful; but we have only to look around us to see how soon and how easily this inherited tendency may be atrophied. Switzerland, with its sublime mountain scenery, has never produced a great poet or a great painter. The great majority of our own people have little real appreciation of beauty, and why? Because they have not studied it through the interpretations of art. If you doubt this statement, you have only to gaze on the hideous rows of brownstone houses that desecrate the streets of many of the wealthiest portions of New York, and the very ugly barns, covered with patent-medicine advertisements, that disfigure our most beautiful pastoral landscapes. No, the art instinct must be trained, if it is to be kept alive. As Thomas Davison has said: "The sense for the deeper, the spiritual, beauty can be drawn out only by a correspondence with spiritual things, with men in whose lives and persons and works of art, in whose forms and import, this spiritual beauty is embodied." The answer to my first question—Why should we teach art?—is then very simple: We teach art in order that men may be able to appreciate and to produce the beautiful.

My second question is: What are the specific objects or purposes we should have in view in teaching art in the schoolroom? Here I am obliged to confine myself, through lack of time, to considering the objects or purposes of teaching the art of pictorial representation. And the import of this term I shall narrow still further by putting aside the subject of mechanical drawing. That is one of the useful, not one of the fine, arts.

To speak generally, it may be said that the object of art education in the school is to develop in the pupil a love for beauty and the power to pro-

duce beautiful things. Without this love and this power, man is dead to the beauty of his environment. To speak more specifically, we should teach pictorial representation for three distinct purposes: First, that we may be able to portray clearly and intelligently on paper things which can be better presented to the mind through the eye than through the medium of words, either for the purpose of aiding our own memories or of conveying distinct ideas to other people. Second, we teach drawing that we may obtain keener perceptions of the beauties of nature, and that we may preserve what Mr. Ruskin calls true images of beautiful things that pass away, or which we must ourselves leave. Third, we teach pictorial representation in order—and here I am expressing Mr. Ruskin's ideas as nearly as I can recall his words—that we may understand the minds of great painters and be able to appreciate their work sincerely, seeing it for ourselves, and loving it, not merely taking up the thoughts of other people about it. The man who has never ridden a bicycle can have no idea of the exhilaration to be obtained from riding a wheel in the bright, clear atmosphere of the past two days over the magnificent street pavements of Indianapolis. The man who has never tried his hand at verse will always fail to appreciate to the full the glorious art of Tennyson or of Longfellow. And so, the man who has never made the attempt and tried with utmost patience to express with his pencil the beauties of leaf and flower, of stream and mountain, can never appreciate thoroughly the art of the great artist, he can never compass those divine ideas of beauty and harmony which are his as the heir of all the ages in the foremost files of time.

And now I come to my third and last question: What are the means at our disposal for teaching pictorial representation in the school? Many have been the systems of drawing presented to the teachers of this country. We have had copying from the flat of geometrical design and conventional ornament, and have found it utterly wanting. I have seen thousands of children struggle painfully for eight years through a long series of drawing books, only to find, at the close of their labors, that they could not represent on paper a hat or an ink-bottle. At present there is a great battle in progress between two opposing schools of the educational host. One school contends, as I understand it, that art may be adequately, or, at least, sufficiently, taught by requiring children to draw the objects studied in their nature lessons, and to make imaginary drawings of the characters and scenes described in the literature they read. The other school would begin with studying the geometrical solids, then drawing them and making them, and gradually passing on to objects that resemble them in form. The first school I shall call the science-art school; the second school I shall call the geometrical-art school. Both schools have, unquestionably, elements of truth and value in their procedure. The science-art school brings the

child face to face with nature. So far, so good, But it forgets that the objects of science and the objects of art are different — that the object of science teaching is the discovery and formulation of natural law, and that the object of art teaching is the discovery and interpretation of beauty. We should not teach the looking at nature, as Mr. Ruskin somewhere says, that our pupils may learn to draw ; but we should teach drawing that our pupils may learn to love nature. Nor is that so-called cultivation of the imagination through drawing imaginary pictures of scenes and figures described in literature altogether to be commended. The practice of drawing purely imaginary scenes and figures — scenes and figures that have not been appreciated by the mind through the senses — may be, I think almost necessarily is, injurious. Mr. Jones, in his eloquent description yesterday of how Leonardo da Vinci painted the Last Supper, by finding suggestions and models for the faces of the picture in the faces of the men he observed around him, showed us the only right way of illustrating historical or imaginary scenes. Therefore, until the pupils are mature enough, and observant enough, to use, however imperfectly, the method of the artist, the drawing of purely imaginary scenes is better omitted. When the time does come for this work, it should be done altogether from models arranged to represent a scene.

Furthermore, the science-art school errs in supposing that the technique of art may be learned through the drawing that is a part of all nature study that is worth the name. The veriest tyro in art will tell you no. To the science-art school I would say, in the words of John Ruskin : "Do not think that you can learn drawing, any more than a new language, without some hard and disagreeable labor." Art has its own language, which must be learned with much patient endeavor and under judicious instruction.

The geometrical-art school is open to criticisms of another kind. This school pays sufficient attention to technique, but its work, when carried too far and protracted too long, as it generally is, becomes profoundly uninteresting. It substitutes geometrical, machine-made forms for nature forms. It does not lead to the appreciation of nature or of the interpretations of nature by great artists. It is a great advance over all preceding systems of formal drawing, but I cannot conceive it possible that it is the ideal system of teaching art.

If, then, both of these schools are lacking in some important particular, what system, what method, shall we employ ? The ideal system or method, if it ever comes, will be given to us when a great teacher arises who is also a great artist. In the meantime, however, it may not be impossible to discern the lines along which art education must proceed, if it is to be serviceable to the individual pupil, and if it is to assist the progress of civilization in this land.

Suffer me to recall the three great objects of teaching drawing—to make record of things that may be better conveyed to the mind through the eye than through words, to obtain keen perceptions of the beauty of the natural world, and to enable us to understand the interpretations of nature and of life bequeathed to us by the great artists. If these be the purposes of teaching drawing; if we are to learn through drawing to appreciate the beauty of nature and of life; if we are to learn through drawing to understand an artist's interpretation of nature and life—it follows that in all exercises we must draw either directly from nature or from pictures or casts that are true interpretations of nature. Absolute fidelity to facts, absolute fidelity to truth, will be the first requisite of the ideal scheme of art instruction. It may not be denied that skillful draughtsmen may be made by methods that take no account of nature. It may not be denied that whole nations have been permeated by art—art, too, delicate and refined—that is founded, not on nature, but on man's vain imaginings. But the significant fact is that every people whose art ceased to interpret the facts of the universe, and became built up out of figments of the imagination, has decayed morally, physically, and intellectually. If ever art becomes geometric instead of naturalistic; if it draws spirals and zigzags instead of flowers and foliage; if it draws monsters instead of men—it means that the people who practice it will be cut off from the chief sources of healthy knowledge and natural delight. This, I take it, is the great message that John Ruskin brought to humanity—the message to which we in America must needs listen; that art followed merely for its own sake, irrespective of the interpretation of nature by it, is destruction of whatever is best and noblest in humanity; and that as nature, in proportion as she is loved and studied, is ennobling, so is art founded upon nature ennobling also.

But, secondly, as mere imitation, exact reproduction of natural forms, is either not art at all or one of the lowest forms of art, our ideal system of teaching art must contain something more than mere imitation or reproduction. A good picture shows not only absolute fidelity to fact, but gives evidence of design or plan. The artist must choose some things, cast others aside as of no consequence to his plan, and arrange all that he selects. Without the first requisite, fidelity to fact, a painting is either non-moral or immoral in its tendency; without the second, selection and design, a painting is seldom beautiful, seldom serviceable to those who look upon it. For the artist's mission is not only to represent with fidelity, but to represent in such a way as to direct the spectator's mind to those things which it is vital that he should see; and, more important still, to guide him to those thoughts and feelings with which the artist regarded the facts.

But, some one will object, the public schools are not intended to make

artists. Very true, I answer ; but it is a part of their mission to introduce the child to his heritage of art ; and this will best be done, no matter how short the distance we go, by following the lines of true art and not of false art.

And this brings me to my third and last condition under which an ideal system of teaching art will be developed: that system will make large use of the imitation and study of true works of art. A healthy, gifted child can no more refrain from imitating than a mountain lake can refrain from imaging the trees that adorn its shores. We should give the child fine art to imitate and, through his imitation, to study. Good, true art that holds the mirror up to nature should adorn every schoolroom wall. But not a vestige of Egyptian, or Assyrian, or Indian, or Chinese art that was instrumental in bringing about the moral and intellectual decay of these peoples should be permitted. Art that could come only from peoples buried beneath a mass of customs and usages has no place in an American schoolroom.

Mr. Ruskin has shown that as yet but three schools of perfect art have appeared in the world — the Athenian, the Florentine, and the Venetian : the Athenian, which makes the most perfect representation of the form of the human body ; the Florentine, which gives us the most perfect expression of human emotion ; and the Venetian, which represents the effect of color and shade on all things, chiefly the human form. Every teacher should make himself perfectly familiar with several good examples of each of these three schools, which he should use as touchstones wherewith to try the value of pictures proposed for class-room decoration. If he brings them to this test, there will not be great difficulty in determining what shall be admitted and what shall be excluded. The real difficulty comes in selecting pictures suitable for the first four or five years of school life. I should say that, at least in large cities, where the majority of children know little or nothing of country life, the requisites for these pictures are, first, that they should have color ; second, that they should take the children out of doors ; and third, that they should serve to increase children's appreciation of classic literature. How, without pictures, can children who see nothing of nature but strips of the sky through street cañons understand, without pictures, such expressions as "the meadow sweet with hay," "the spring that flowed through the meadow across the road" ?

Pictures that will interpret nature and interpret literature are the pictures we need.

"Leave, therefore, boldly, though not irreverently," as Mr. Ruskin tells us, "mysticism and symbolism on the one side ; cast away with utter scorn geometry and legalism on the other ; seize hold of God's hand and look full in the face of His creation, and there is nothing He will not enable you to achieve."

DISCUSSION.

ART AND EDUCATION AS RELATED TO THE PUBLIC SCHOOL.

C. J. BAXTER, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION, NEW JERSEY.

Not knowing the line of thought to be followed by the speakers who are to precede me, and not wishing to have my reservation invaded, I have taken the liberty to select "Art and Education as Related to the Public School."

Education and art appear, on close examination, to be essentially related. Attempts to dissociate them lead the thinker back to the essence of terms, to the ideas with which, as root-words, each is most closely connected. Art, in a broad sense, may be defined as covering everything that is learned by the child born amid civilized environments.

The infant of the jungle learns little, for its people have few wants, which are easily satisfied by a few things easily acquired. The jungle art is the rudimentary art. The infant in the highly civilized community finds itself compelled to learn a greater variety of things, for here its opportunities for development make it conscious of many wants, that demand many things, and which are acquired, in the main, with difficulty. Developed art is an essential accompaniment of this higher scale of existence, and it differs from that which is more rudimentary, not in essence, but in diversity and degree.

In another sense art may be regarded as meaning anything and everything that does not come unaided, unthought, and undrawn from nature to humankind. In this sense it is art for a savage to clothe himself for the protection and comfort of his body, and to house himself so as to be independent of the weather. Though the primitive hut is very inferior to our own well-appointed homes, and vastly different from the Pantheon or the Taj Mahal, so far as construction is concerned, in its essence it is at one with those supreme expressions of architectural art. In each case there were the first steps and the ultimately developed conception of something to provide against some need, to secure some pleasure, or to answer to some sense of beauty. And in each case the result is something thought out, and something wrought.

In its generally accepted meaning "art" is regarded as a system of rules or traditional and conventional ways of doing certain things that require special aptitude and ability; the application of skill to the production of the beautiful by imitation or design; and in this sense it is applied to what, for want of a better term, is called the "fine arts." In reality all arts are fine. It is a singular misuse of the term to limit it to the production of a picture, a statue, or a musical composition. The line that sets off the so-called fine arts from the useful or industrial arts is very plain only to the superficial thinker. When sought by one capable of broad conceptions and possessing acute perceptions, it continues to recede until lost in the unknown realm beyond his mental horizon.

From these presentations, in which it would seem there is nothing wrongly assumed, may be deduced the very brief, yet comprehensive and generally applicable, definition: Art is all there is to be learned — all there is to be learned, from the lowest to the highest and most complex form of civilization, from the beginning to the bound of life.

Closely associated with this general conception of art is the idea of education. It is generally, but erroneously, asserted that "education means the drawing-out and unfolding of the powers of the mind." It would be interesting to know the origin of this fundamental error in the definition of this word. This much we grant it does mean. But how much more? Surely, the infant begins to learn the art of eating, not by any

drawing-out or unfolding of his rudimentary mind, but from the animal sensation of hunger. He continues to learn, that is, to become familiar with his surroundings through impressions from without. That fire will burn his flesh and cause pain he learns from personal contact with this element. If the temperature be tropical, the sun's rays scorching, he seeks the shade; if it be frigid, he shivers and seeks warmth. To the atomic pulsations which are believed to constitute heat he gives no thought. Heat as a "mode of motion" is a sealed book to him.

As art is all there is to be learned, and the act of learning comprises all there is of education, it follows that art and education are inseparably connected. In the application of the term education it is easy to err in one or two ways. One pedagogical idea is that the juvenile mind is, up to a certain age, varying in different cases, incapable of anything more than receiving and retaining various fragments of information. This theory, ably reduced to practice, would tend to convert the brightest child into a parrot or human phonograph. Another idea is that, with the earliest mental training, the mind should be required, not only to receive and retain ideas, but to weigh, to reason, and to judge. This is also a cardinal error and sure, in many cases, to lead to unfortunate results. Its tendency is to convert the child into a prig or mental parietic. Between these two extremes lies the safe, the sane, the natural course of adapting the education to the pupil and to the art that is to be acquired. In accomplishing this the teacher is afforded an opportunity for the display of art of the highest order, the finest of the fine arts. If any part of the general store of art, whether of numbers, of language, of drawing, or of anatomy, which falls to a particular youth at any time, is found to be unsuited to his powers and natural trend, it is the baldest travesty of the work of education to press that particular part upon him. Whatever does not, or cannot, afford the mind pleasant and agreeable exercise cannot be appropriated. To determine the nature of a pupil's natural gifts, and then to develop him in that line, is another opportunity for the exercise of art of a very high order.

It is the misfortune of both art and education in these modern times that the teacher is required to do such a quantity of educating that he is unable to give due attention to its quality. In the golden days of antiquity one of the great philosophers would spend his life in teaching one, two, or three disciples. This was going as much too far toward one extreme as we incline to its opposite. At the close of this nineteenth century the teacher is required to confront from thirty to sixty pupils daily. Each one is attempting to learn one or more of several arts, and each requires what he cannot, from the condition of the situation, receive, *viz.*, direct, personal, exclusive mental contact with his teacher, and, as a result of such contact, an accurate sizing-up by him.

Having thus hastily and imperfectly outlined these general associated ideas of art and education, it remains to inquire: What should be done, so far as the common schools of this republic are concerned in the extension of the educational effort already stretched to exceeding thinness, because already embracing so much, in the way of adding anything of instruction in the "fine arts" to that now given in the useful rudimentary arts?

Anyone who has taught the young of all ages up to maturity knows that among the pupils of our public schools you will not find, on the average, one in a hundred who has the fine-art instinct. Shall the ninety and nine be drilled in these, to them, impossible arts in order to afford the 100th gifted youth the instruction that is in line with his genius and his needs? Shall the youth born without the phrenological organ of time be drilled in music? Shall those with defects of the eye, who have not the color sense (and their number is legion), be forced to contemplate hues and tints, lights and shades, complementary and non-complementary colors, and mystifying foregrounds and backgrounds? School life is too short and time too precious for such misdirected effort.

Then, shall not art be taught in our common schools? Nothing of real merit and

abiding value can be taught there that is not art. All teaching should be along art lines, on art methods, in the art spirit. There is no art so important to us as educators, nor in which we should be so intensely interested, as that of teaching. The youth who can never be made to draw a Phidian outline or comprehend a Rembrandt shade, may yet be trained to write artistically, to read artistically, to perform all his school work artistically; or, in other words, to do it well. Habits of care are artistic. Correct language is artistic. Accurate information is artistic. Precision of thought and its tasteful, terse, and exact expression are highly artistic. No other form of art has equal opportunities for its exercise, is so valuable in daily intercourse, is so generally regarded as evidence of culture, presents so great possibilities for development, and comes so far short of receiving attention in keeping with its importance.

It is not so important that our pupils be taught artistic things as they be taught the essentials of a common-school education artistically; be so taught that such a love of knowledge is acquired that the mind never wearies of its pursuit; so taught that the termination of the so-called school days marks an epoch in the acquirement of knowledge, and not its end.

Education that accomplishes such results is well worthy of the name, and must needs be excellent to a degree that renders it truly artistic. Instruction that is a certain means to such ends is the greatest need of our American schools. Meet this need, and we will more than double their effectiveness.

Reference is often made to art training in the schools of Japan and China. What has it accomplished? For thousands of years this art training has been in progress, but is there today in all China and Japan, with a total population of 450,000,000, one who has a mastery of perspective? Was there ever such an artist in either of those countries? True it is that free-hand drawing is there the general practice, and that some very pleasing results may be credited to it. But, aside from their bronze work, what do those hundreds of millions of art-trained people have to show in art in comparison with little Holland, whose population was never 5,000,000, and yet monopolizes about half the space of the dictionaries of painters and their paintings? Holland never made training in art a part of the educational work in her common schools; nor did Greece, nor Italy; and yet either of these countries dwarfs China and Japan artistically as greatly as China and Japan together do either of them numerically.

The visitors to the Columbian Exposition in 1893 do not need to be told that the revelation there made of American achievement in the fine arts was such as to astonish all those who had accepted the generally undisputed statement that we, as a commercial nation, could not be expected to make a creditable display in art. The most astute and experienced critics from Europe freely expressed their astonishment at the beauty and fecundity of our art, not only in the so-called industrial arts, but in painting and sculpture, and in the daring and unprecedented architecture. How much of that magnificent display had its origin in art training in our common schools?

It is certainly necessary that drawing be utilized in our public schools from the day of entrance until that of graduation; yet it should not be taught as an end, but as a means to an end. Not that a high degree of proficiency in this branch is not desirable, but we cannot ignore the limitations and the requirements of the public school. The equipment it is capable of giving for the duties of life and the responsibilities of citizenship is, at the best, but meager. Drawing is most forceful as a means of expression, is most helpful in forming the habit of accurate observation and in developing perceptive power. It is not only a valuable feature of nature study and science study, but a necessary part of all forms of manual training. Though ever an important feature of all school activities and indispensable to effective teaching, the requirements of the brief school period to which seven-eighths of our children are limited relegate it to a subordinate place in the common-school curriculum.

For an extended education in purely artistic lines there will always be adequate provision for the gifted few in well-equipped art schools. To minister to the higher æsthetic tastes of the many, to give them, so far as practicable, correct ideals and cultivate their sense of the beautiful, I fain would see our school buildings artistically environed and constructed, and our class-rooms built, not only on hygienic principles, but also on artistic lines, and ornamented with classic casts and pictures of beauty and of story.

The necessity of making the public school the fountain of general information will always exist. It will always be the instrument of preparation for the ordinary occupations, for instilling a love of freedom, a proper pride in our history, and a due appreciation of the glory of our opportunities. All these are the golden fruit of our educational tree, that has borne so well in the past, that is bearing so abundantly in the present; and art, in its broad and true sense, is its beautiful, life-sustaining foliage. It offers us still greater promise for the future, if we shall be mindful not to depart too far from the traditional lines; if we shall not weaken and confuse our educational system by attempting more than can be accomplished.

Art and education are twin sisters, and hand in hand they are marching to a common goal in this republic—each a stimulus to the other, each indispensable to the other, and each beckoning the American youth to greater heights of fame and usefulness.

ROUND TABLES.

ROUND TABLE ON CHILD STUDY.

The round table on Child Study was called to order at 2:40 o'clock, with Professor M. V. O'Shea, of the Buffalo School of Pedagogy, as conductor. The general subject for the afternoon was "The Contributions of Child Study to Practical Teaching," and the programme was as follows:

I. What has inductive, statistical, or scientific child study accomplished thus far that would suggest modifications in the recent curricula or methods of teaching in our schools?

1. The Development of Voluntary Motor Ability, Professor W. L. Bryan, University of Indiana.

2. Fatigue and Defects, Superintendent H. E. Kratz, Sioux City, Ia.

3. Children's Interests, Professor G. W. A. Luckey, University of Nebraska.

4. The Relation of Motor Activities to Intellectual Development (an abstract), Dean Edward R. Shaw, School of Pedagogy, New York.

II. How may the results of child study be best embodied in the curricula and methods of teaching in our schools as rapidly as they become reasonably well established?

1. In the Elementary School, James L. Hughes, Inspector of Schools, Toronto.

Discussion: Superintendent Samuel T. Dutton, Brookline, Mass.; A. W. Edson, Agent, State Board of Education, Massachusetts; Superintendent George Griffith, Utica, N. Y.; Superintendent Clinton S. Marsh, N. Tonawanda, N. Y.; Superintendent F. Treudley, Youngstown, O.

2. In the High School (an abstract), C. H. Thurber, Associate Professor of Pedagogy, The University of Chicago.

III. How may teachers in service study their children in the class-room with the greatest advantage and profit?

1. The "Still Hunt," Miss Sarah C. Brooks, Supervisor Primary Schools and Kindergartens, St. Paul.

2. Special Studies, as upon Children's Reading, etc., Professor L. H. Galbreath, Illinois State Normal University.

3. Physical Measurements and Tests (not furnished for publication), Professor W. O. Krohn, University of Illinois.

4. With the Co-operation of Parents, Professor C. C. Van Liew, Illinois State Normal University.

IV. Should Teachers in Preparation have Instruction in Theoretical and Practical Child Study? Miss Mary E. Laing, Oswego Normal School.

HYGIENE OF MOTOR DEVELOPMENT.

BY PROFESSOR WM. L. BRYAN, UNIVERSITY OF INDIANA.

I deprecate the view that art can receive from science or philosophy exact rules. The artist stands between so much of science, philosophy, or general culture as he has assimilated, and his task. In the few minutes allotted to me I shall only hope to make a suggestion which teachers can take into account along with all the other conditions surrounding their work.

The nervous system may be regarded as a bank, where the blood is constantly making deposits of energy, and upon which every motion and every thought are making draughts. The most important thing for any man on this earth is to have his account in that bank on the right side of the ledger. The worst disaster is to have nervous habits, through which the priceless capital of life is constantly wasting. For the end of such waste is always remediless bankruptcy.

Rational school hygiene—that is to say, common sense—requires that everything about the school—heating, lighting, ventilation, every school requirement, and, so far as possible, every school practice, whether required or not—shall be proved for its effects upon nervous habits. Whatever seems good from every other point of view, but bad from this point of view, should be banished.

The way in which wasteful, nervous habits are usually established is through frequent nervous overflow. Let me illustrate: If I clinch my hand with all my might, a great amount of energy is released which does not go into the clinch. Many other muscles are also clinched and trembling. My breathing is affected. My heart beats violently. Without doubt all organic functions are affected. In this case evidently I spend an enormous amount of nervous capital to no purpose. If I am rich, I can stand it a few times. But if for any reason whatever an overstrain of this sort, followed by explosion and overflow, occurs frequently, there is established in many nerve centers a fatal facility for explosion and overflow. When this result arrives, each of these centers is a gate through which the strength of my life seeps away useless.

Now, there is an array of scientific evidence to show that there is special danger of inducing wasteful nervous habits in school by requiring too precise voluntary muscular control, for too long periods at a time. To keep still, to handle slates so that they shall not strike the desk, to march to music, to write, to draw, to keep the eyes sharply focused upon any sort of work, to pay close attention—all these require fatiguing muscular control. Most of them require voluntary control of the small muscles. Any or all of them are liable to induce overstrain, overflow, and, if persisted in, habits which lead to some form of neurasthenia. All these results are, of course, more likely to occur in the younger children, in children with neuropathic predispositions, and in all children in special periods of their development.

Taken generally, this warning from science is undoubtedly valid. The specific questions remain: How far are existing methods actually affecting the health of children, and, What course should we pursue in practice? I believe that both these questions are open.

It seems certain, however, that out of every hundred children some are injured by the requirements now usually made. I base this opinion upon reliable scientific publications, upon reports made to me by primary and kindergarten teachers, and upon personal observation. What we need just now, above all things, is this question in the eyes of all the teachers: Are we doing anything that is inducing in any of the children the habit of easy fatigue?

With regard to the second question, I believe that no one can answer it but school men. We have not to do with an abstract experiment. We have to do with living children and the whole problem of their preparation for life. I will say, however, from the outside that I do not believe that the practical outcome will be the eschewing of precision in the school.

There are three standpoints for viewing every educational question. The first says, Get results. The second says, Consider the nature of the child. The third says, Do both, or fail. On this point the first says, Make the boy write a good hand. The second says, Let the boy's hand play. The third says, By short, non-fatiguing, but substantial, efforts, let the boy grow toward the acquisition of a good hand.

Senator Stanford was the first to begin the training of race horses when they were colts. "Let them do their best for their distances. It is supreme effort that develops," he said. Until I get further light, this is my view of the whole question of motor, and, for that matter, of intellectual, training. Do your best for your distance. It is supreme effort which develops.

As a final word, I wish to say that there is one thing of more hygienic importance than the *method* of motor training, and that is the emotional tone of the schoolroom. A short time ago, in Anderson, Ind., I saw some artistic primary teaching, which had this last touch of excellence that results were obtained without emotional storm. The children were doing good things, with reasonable attentiveness, and they were not wiggling and squirming under the spell of a hypnotic teacher. The hypnotic teacher, whom the parents all praise, and whom the school board always re-elects, because the children cannot take their eyes off her, does more to induce neurasthenia than does any method of teaching penmanship which I have seen.

FATIGUE AND SENSE DEFECTS.

BY SUPERINTENDENT H. E. KRATZ, SIOUX CITY, IA.

The cry of overwork in our schools is frequently heard. We superintendents are bound to listen to that cry, and give it most careful consideration. If the requirements of the schoolroom are too heavy, if the hours of work are too many, if the study periods are too long, if the rest periods are too infrequent, if any change can be made by which the maximum of mental efficiency can be secured with a minimum expenditure of the child's energy—then let the cry never cease until superintendents introduce such needed changes.

Fatigue is nature's kind warning against overexertion. We should no more ignore its manifestations in the schoolroom than the fireman does the safety valve of his engine. Here are important indications which, if carefully studied, will give the right ordering of the daily work, and secure the largest degree of mental efficiency with the least loss of energy. This problem has not yet been fully worked out, and we should earnestly address ourselves to its solution.

Experiments have shown that mental fatigue is sooner induced where work is distasteful, because of the heavy strain that is brought to bear upon the will to keep the pupil at his task. The struggle between duty and inclination is taxing and severe. If the body is not well fed, weariness, irritation, and difficulties of discipline follow. It is believed that irritability is due to an acid which is formed in the blood after severe activity, and that this is relieved by a fresh supply of oxygen. We are all familiar with the fact that the adult is more irritable when tired, that the best of us are more piously inclined in the morning than at the close of a hard day's work. Give the children the benefit of such knowledge, and help them over such periods. If oxygen in blood corrects this acid condition, throw in some music or physical exercise, when children manifest weariness and irritation.

It is known, also, that rapid growth diminishes endurance, and, since these periods are not the same in the two sexes, that some modifications should be made in the course of study to meet that demand. Vigor, or its lack, varies also somewhat in the hours of the day, as well as during different kinds of weather, etc. These should all have due consideration.

Experiments have shown that with the average pupil mental fatigue from school work, while it is quickly induced, quickly passes away. Mental efficiency, or skill, the result of practice, however, is much more permanent in its character, and is not soon lost. Hence, to secure the maximum of skill through practice, with the greatest economy of effort, provide more frequent rest periods, and thus secure, through this rapid recuperation, an almost continuous high state of mental vigor. But little, if anything, of skill through practice will be lost through these more frequent rest periods, because skill is not easily lost. Here, I believe, is a suggestion that we will more largely utilize in the near future. I believe it has in it the possibilities of greatly increasing the efficiency of public-school work, as well as relieving it of much of its present drudgery.

Another fact that will greatly aid in realizing a greater freedom from fatigue—one that is not new, as none of these are—is that change is rest.

There are some facts which point in the direction of the theory that each sense has a corresponding brain area to which such sensations are referred. There is a brain area to which sights are referred; another, sounds, etc. Many of us recall how, at the World's Fair, when sight was so weary that nothing more could be taken in, we then turned to the music hall, and refreshed and rested and reinvigorated ourselves with divine harmonies. While mental activity is a very complex affair, and its localization cannot always be determined, yet there is enough basis of fact in it to warrant utilizing it. Certainly, change is rest, and it is the part of wisdom to arrange the daily programme so as to bring out stronger contrasts in studies.

Our teachers, especially in primaries, have already secured encouraging results in this direction. Not only are music, drawing, and physical culture brought in as sharp contrasts to other studies, but when the first primary children show unmistakable signs of fatigue, the teachers often request them to lay their heads upon the desks, close their eyes, and take a little pretended nap, while the teacher sings some lullaby. A few minutes' rest, and the recuperation is wonderful. Time is economized. We have never made such rapid progress as now.

And here permit me to say just a word concerning the senseless cry against "fads." The thread-bare argument is that the "fads" rob the children of valuable time which should be given to the three R's. The false assumption is that, if the children master a certain portion of the three R's in a day of two hours, they will master three times as much in a day of six hours. Time, dull monotony, can never be made a measure of progress in the schoolroom. Interest, vigorous mental activity, must determine. The "fads"—music drawing, physical culture—instead of hindering the mastery of the three R's, by afford-

ing those strong contrasts in studies so much needed in the daily programme, positively contribute to such mastery. And I make this statement fearlessly that the three R's are better taught in the schools which also teach the "fads" than in the schools where the "fads" are not taught.

Under sense defects I shall confine myself to the discussion of defects in sight and hearing, because these two senses are most prominently utilized in school work.

I have already referred to the localization of sensations in different brain areas. I believe, also, that these brain areas contain countless brain cells, some of which are stimulated and developed by sights or sounds; that the number of these brain cells roused up into activity depends somewhat upon the normal condition and activity of the corresponding sense organ; that, if these brain cells do not receive their normal amount of stimulus, during their most impressible, or nascent, period—usually childhood—they will not only fall short of their normal development, but can never afterwards attain to their full measure of activity.

I believe, therefore, that the child's psychical development depends very largely upon the normal activity of his senses. Should this activity of his senses, because of defects in the sense organs, fall below the normal, his psychical development must also be restricted to a lower plane of development than the normal.

Some eminent authority has stated that nine-tenths of our sense knowledge comes through sight. A child whose vision is one-third below normal would, therefore, be condemned to construct his thought world out of three-tenths less material than his normally active brother. Think, then, of the children, handicapped from the start by defective senses, how they are doomed to live in a contracted sense and thought world, unless their disabilities be early removed. Is there a superintendent present who does not recognize that it is his urgent duty to discover quickly these unfortunates, remove, wherever possible, the handicap, and guard against any schoolroom conditions which even tend towards impairment of the senses?

The number of those suffering from defective vision is surprisingly large. Thousands of school children in this country and in Europe have been tested, and the same sad condition is discovered. Per cents. vary from 10 to 30, and even higher. We began such tests in the Sioux City schools nearly three years ago. The returns from our last test have just been compiled, and are as follows: Number tested in all the grades, 4,256; defective sight ranged from 6.6 per cent. in the first grade to 19.6 per cent. in the sixth grade, with an average of 13.9 per cent. throughout; 590 pupils have defective sight.

No doubt the thought is suggested that we have some highly unfavorable conditions operating in our schools, but I wish to assure you that our schoolrooms are exceptionally well lighted, and our plans of work, text-books, etc., are similar in use to those of schools in general. If you haven't made a test of this matter, will you not do so at the first opportunity and convince yourselves that school work is very seriously retarded by defective vision?

Such tests are easily made with oculists' test cards. It should be remembered that these tests, made by the teachers, are not intended to determine the exact disease, but simply to determine where defects exist. When defects are discovered, parents should be notified and urged to secure proper treatment. In case parents are in indigent circumstances some means of treatment can be easily secured.

The results richly compensate all the effort expended. Many pupils with defective vision secure relief through proper treatment or the use of glasses. Many cases of defective vision are discovered where no one but the teacher suspects it. Children have also a sensitiveness about revealing such defects, but generally they are not aware of them. Many such children, when sight is rendered normal, make surprising progress in their school work. Pupils who are near-sighted are seated in front of or near the blackboard, and given every advantage concerning the light.

Testing of the sight has also demonstrated that a word can be more readily recognized than a letter, and hence word and sentence methods of teaching primary reading should be utilized.

The number of those who are defective in hearing is also surprisingly large. There is, however, a larger number of those who are defective in hearing, and are unaware of it, than in sight. Tests here bring many surprises, even to adults. There are two reasons why partial deafness in pupils is not readily discovered: one, pupils, from a false sense of delicacy, try to conceal it; the other, they are often unconscious of their defect. Many persons have impaired hearing in one ear, and are not aware of it.

The mode of testing is usually by the ticking of a watch. A normal ear hears an average watch about two feet from the ear. Here, as in testing the sight, the results richly compensate all the efforts expended. Causes of deafness are better known. I need not go into the discussion of the structure of the ear, only to speak of a few of its features. We are all familiar with the office of the Eustachian tube, how it equalizes the pressure on the membrane of the ear by affording an opening for the passage of air to and from the middle ear. This Eustachian tube opens into the naso-pharynx behind the soft palate. Impairment of hearing often begins through secretions retained about the mouth of the Eustachian tube, which temporarily close this opening. The most common causes of such secretions are adenoid vegetations, which form in the vault of the naso-pharynx and are easily removed, enlarged turbinated bones, and enlarged tonsils.

Such pupils can usually be recognized by their open mouths, obstructed breathing, thick nasal voice, elongated face, and dullness of expression, as well as dullness in general. As to this dullness to which they are thus condemned, you can form some idea by closing the nostrils with the thumb and finger and performing the act of swallowing two or three times in rapid succession. In this depressed condition they are condemned to live and act. What wonder that they become dull!

Another singular feature about this condition is its variability. Some days these stoppages of the Eustachian tubes do not occur, and such pupils manifest a mental brightness that is in surprising contrast to their usual dullness. Rapid progress is made such days, but when the secretions again close up the tubes, they are their usual dull selves. Teachers not understanding the causes which are operating to produce this depressed condition are apt to regard it as confirmatory evidence of the existence of a spirit of obstinacy or perversity, and proceed forthwith to exorcise the imagined evil spirit by an exercise of muscle. Children are thus too frequently driven into obstinacy, sullenness, and finally driven into that condition of stupidity to which they were at first unjustly assigned.

Superintendents, this is not a sensational picture. I firmly believe that a large per cent. of the cases of "falling behind" begins in such defects as the above. The loss in teaching because of defective sight and hearing is not generally understood, or appreciated; nevertheless, it is alarmingly great and threatens to increase. Talk about enriching the course of study! Here is the possibility of enriching the minds (lives) of many thousands of unfortunates.

And the loss is not all summed up in failure of pupils to hear instruction given, nor in the condemning of pupils to live in a contracted thought and sense world; but these unfortunates retard class work, furnish a large per cent. of the cases of difficult discipline which wear out teachers, and furnish the recruiting ground for many so-called "bad boys and girls."

We have found in our investigations, covering a period of more than three years, that many pupils who were supposed to be hopelessly dull were simply dull in hearing, and, where this disability was removed, manifested at once an increasing intellectual vigor. The same results have been found true wherever tested.

Per cents. vary. Our investigations show that over 10 per cent. are defective in hearing.

Permit me to relate a few of our own experiences. Three years ago my attention was called to a boy who had entered our beginning primary grade some five months previously. Although apparently an average boy, and coming from one of our best families, he soon fell behind his class. In spite of the most earnest efforts of his teacher, he made no progress, and the first year was practically lost. By some accident it was discovered that his sense of hearing was defective; an examination by an aurist disclosed adenoid vegetations, which were easily removed. At once the boy's mental powers seemed to be invigorated, and he has ever since kept pace with his class.

A case of total deafness in one ear was reported to me the other day. A girl was a third-grade pupil, and stated that more than a year ago a part of the rubber top of a lead pencil had been lodged in her ear. It seemed incredible that any parents should be so criminally careless as to neglect to have it removed at once, even though they were in indigent circumstances. I sent the girl to one of our aurists, with whom I had made arrangements, and, after several trials, he succeeded in fishing out a piece of rubber more than a quarter of an inch in diameter and an eighth of an inch long. Fortunately the ear had not been permanently impaired, but such result would have soon followed. The girl now has normal hearing in both ears.

Just a few days ago I found a boy nine years of age in a second-grade room. The teacher had discovered that his eyesight was greatly impaired in one eye, but so far nothing had been done for him. We at once took the case in hand. He had lost over a year through his defective eye.

I found also a thirteen-year-old girl, just entering the third grade. Investigation disclosed that she had been in school pretty regularly, but had failed of promotion because of poor work. Recently her parents have placed her under treatment. Her vision was found to be one-fifth of the normal. Is it a matter of surprise that she lost nearly three of the best years of her life? She is now making wonderful progress.

Fellow-superintendents, this is a rich field for work. Let me urge you, if you have not done so, to occupy it. It is a very easy matter to secure the co-operation of oculists and aurists. I found that when I went to them, they were not only willing, but glad, to assist in relieving the needs of these unfortunates. Everyone of them promptly offered to give his services free to those children in indigent circumstances. I want to say that the cordial co-operation accorded me by them in this humane work was very refreshing, and greatly strengthened my faith in the altruistic side of human nature.

I feel confident that you can secure the co-operation of these oculists and aurists in every city, not only because of the humane instinct which would prompt them to respond, but also because they need such cases in their clinics to illustrate these defects before their medical students.

PRACTICAL RESULTS OBTAINED THROUGH THE STUDY OF CHILDREN'S INTERESTS.

BY PROFESSOR G. W. A. LUCKEY, UNIVERSITY OF NEBRASKA.

I find myself objecting to that spirit of the age which is constantly clamoring for the practical results of every new movement or scientific investigation, without granting sufficient time for the proper digestion or assimilation of the facts. The tendency of this spirit is to retard rather than to advance truth, and it frequently causes the giving forth of hasty generalizations which go far toward placing the whole subject under disrepute. The

work of the scientist must not be hurried. The more complex the subject under consideration, the more time and freedom from external influences are required.

I do not wish to criticise, however, that legitimate desire for the immediate practical which the condition of the age makes necessary. Leisure hours will allow culture for culture's sake, and science for science's sake, but the many demands upon the time of the average citizen of today require him to economize his energy in the direction of present and future efficiency.

Perhaps the members of no other class of society have more frequent or urgent demands upon their time, or fewer leisure hours, than teachers. For this reason it is to be expected that teachers should desire to know some of the practical benefits to be derived from a study before entering heartily into the work. It must not be forgotten, however, that the working-out of any subject may prove eminently helpful, while the results themselves are of little value.

Teachers should not make the mistake of thinking that it is only necessary for them to use the facts that others have gained in order to become proficient in their work. While much of our knowledge must always come through this second-hand source, yet it may well be questioned whether anyone can become a true teacher who is unable to carry on original investigation. Every teacher should have lines along which she can think independently and intelligently. She must be a master in some field of thought in order to be a guide and an inspirer of others.

It is here that I should place the greatest practical value that has yet been derived from the study of children's interests. The inspiration, knowledge, understanding, and real growth that have come to the teacher who has earnestly watched the throbbing pulse-beat of her school in order to become better acquainted with the real interests of her children, have exceeded all anticipation. She has observed, questioned, and read; then observed and questioned again; each day has added new life, both to herself and to her school. The mass has become individualized, the teaching improved, and the native interests of the children aroused.

The effect of this actual work in child study upon the teacher can scarcely be over-estimated. She has become interested in the problem that lies at the foundation of all true teaching. It does not require a very keen superintendent to be able to pick out those teachers who have really become students of childhood. But the great benefit derived comes from the actual work, and not from the mere study of results. As well might an individual hope to obtain a physical education or become an athlete by merely sitting where he could hear the commands of the trainer and oversee the executions of the same, as to hope to become acquainted with children through the study of another. Knowledge might be gained in either case, but not education; for the latter means growth and skill gained through individual activity and exercise.

While it must be admitted that child study is greatly influencing our practice in teaching, it may be claimed that it has not materially added to our knowledge. For instance, every subject in the school curriculum has been thoroughly discussed, and opinions diametrically opposed, including the various shades between, have been maintained. These opinions cannot all be right, but some of them may be. Now, when child study comes to the rescue and assists us in determining the right, it may be stated that what we have gained was advocated by some writer before. Nevertheless, we have given tangible proof of what was only vaguely accepted by few, and possibly practiced by none. This is especially true in the studies on children's interests, a subject which covers nearly the whole field of children's spontaneous activities.

Take, for instance, the many studies that have lately been made of children's drawings. These indicate that the child begins drawing as a means of expression, and not as a matter of imitation. In the beginning he likes to draw, and improves rapidly if allowed

to make brief sketches of his own environment and thought ; but dislikes to draw and loses interest if confined to rule in which imitation of form is prominent. Young children show great native interest in drawing as an early means of expression, but there seems to be an arrest of interest about the age in which the child acquires the ability to express himself in writing. The spontaneous drawings of children are not conventional, but show constant evolution, in which every change means progress. Children are most interested in drawing sketches of people and animals in which life and motion play a part. Next in interest are houses, plants, and crude illustrations of local environment.

The first drawings of the child are simply the result of memory images. Later, however, he becomes interested in making accurate drawings of things as they appear. At this stage the child becomes especially interested in form, perspective, and the grammar of drawing. For this reason the child's drawings differ from those of the adult. The latter represents artistically an instantaneous photograph, while the former endeavors to show in a single picture a series of photographs. From these and many other facts, which this study has revealed, we are led to infer that very much of the teaching of drawing has been, and still is, wrong. The remedy may not be so apparent. Besides, I must admit that in all this work I have been too much interested in the gathering of evidence, and too much at sea, to feel ready to point out specifically the needed changes.

Everyone must be familiar with the progressive changes which are continually occurring in text-books, school curricula, and methods of teaching. Many of these are due to the results of child study, or to the keen observation of some educator along parallel lines, which is virtually the same thing. In this way many of the discoveries in this field seem to have been anticipated and worked into the curriculum before the results have been fully established.

From our studies of children's drawings I believe we are at least warranted in these suggestions :

1. For the first three or four years in school the drawing work of the children should consist in encouragement of spontaneous drawings and frequent illustrations of objects of interest in the various lessons and local environment. The object here is not alone the acquiring of a free and accurate use of the muscles, but also the increasing and prolonging of the inherent interest of the child in expressing his thoughts in drawings. This will give greater play to the individuality, which the teacher can use to advantage in future lessons. She can also direct the work somewhat by allowing the class to see all the sketches, and by calling attention to the more appropriate drawings.

2. The grammar and technique of drawing should be reserved for the period in which the child becomes interested in sketching things as they appear, and it should then be taken up incidentally in connection with the child's own drawings. While modeling may be given with advantage in the first period, accurate drawings of things as they appear, or geometrical form, should not be insisted upon before the second.

Again, from our study, I believe we are warranted in advocating even more radical changes in our teaching of writing. Children show much interest in writing when permitted to write large or to scribble, but become cramped, nervous, and irritable when confined to small, accurate writing, often between ruled lines. This is unnatural and wrong. Who thinks of confining the baby, in its first attempts to walk, to accurate steps and parallel lines? If the results of child study mean anything, they mean that all the writing of the child from five to eight years should be on the blackboard, where he can write large, and avoid those cramped finger movements which are sure to result when the child is asked to do that for which nature has not yet paved the way. During this period of blackboard writing the child will get full control of the larger muscles and acquire a knowledge of the form, proportion, etc., of the letters. With this experience, and with the greater development of the muscles, the child will be able to take up more successfully the subject

of writing on paper. Two years ought now to be sufficient to complete the instruction in writing, and especially so if the work is properly presented. During this period chief stress should be placed on position, movement, etc. The shapes of the letters have already been acquired through the blackboard practice, which should be continued.

Our study of children's interests likewise suggests changes in reading. The stories should conform more nearly to the child's form of expression, which is different from and more pleasing to children than the expression of similar thoughts by the adult. In preparing our primary readers, therefore, we should select the stories as told by children, possibly by children of the next higher grade. Classic stories may be read to children, and they in turn requested to retell them. By wisely uniting the best parts of these retold stories, we will have the story complete in its most interesting form for children. Such is the work of Miss Smythe in her "Old Time Stories Retold."

From four to seven the child seems to have unusual interest in knowing the names of things. This desire may be stimulated and used to advantage in teaching reading, language, and the common objects—plants, animals, minerals, etc.—in the child's environment.

Children show more interest in colored than in uncolored pictures, but unless the former are of high grade, they soon lose their attraction. Again, in the rapidly growing child, interests are changing constantly, due perhaps to the change in form of nervous structure; and if the pictures and subject-matter do not allow sufficient leeway for this varying interest, they are sure to grow monotonous and dwarfing. Pictures that bring up real memories have a peculiar fascination, and for this reason pictures of the child's own environment should furnish a large part of the illustrations of his early readers.

Girls and boys show great inherent differences in their lines of interest, as seen in their play, their stories, their spontaneous drawings, their likes and dislikes. This difference is not sufficiently recognized at present in our courses of study and in our teaching.

Has not the study of children's interests made us feel that the order of teaching form by the Froebelian gifts is contrary to nature? We begin with an artificial, typical form, which is the result of man's abstraction from nature. In the sphere we give the child generalized form before he has the concrete cases from which it has been abstracted. Should not the melon, the apple, the peach, the orange, etc., lead up to this generalized form, just as the various concrete forms lead up to the abstract term "dog," etc.?

Following the line of children's interests, our teaching should be extensive rather than *intensive*. Children's interests are fleeting, but soon return to the same subject, with ever broadening circles. We should not, therefore, expect of the child adult thoroughness in any subject. To demand such would most likely mean arrest of development. In many subjects the child is satisfied with a mere glimpse, and more would be a surfeit. Nevertheless, these glimpses should be clear and systematic, each one leading to a broader and deeper knowledge of the subject.

Every child, as well as every adult, has his dominant interests, which, for the time being, are shaping his life and character. Interest alone gives persistence to the child's activity, and it is this continued activity which establishes habits, gives permanence of character and stability of will.

Whatever may be the demands of the curriculum, the true teacher will deviate far enough to discover and call forth the native interests of the child, for it is only when this interest is aroused and properly directed that the schoolroom can offer anything of permanent good. If we are right in assuming that character is the resultant of habits, the remains of former experiences, we must appreciate the importance of every activity in the child's education. The subject which calls forth the greatest amount of activity will leave the most permanent influence on his life.

The reason that the street frequently stamps itself deeper into the child's character than the home or the school lies in the fact that it offers to him a greater variety of subjects from which to select one more nearly conforming to his native interest. This tendency is being minimized by every true student of childhood by discovering the child's real interest, and bringing the school environment and the subjects to be taught in harmony with this interest.

In this short paper I have been unable to mention many other facts which may seem to you to be more clearly pointed out by our study of children's interests than those given above — such, for instance, as: the greater importance to be given to *use* and *movement* in our early instruction of children, and the less stress to be given to *form*, *structure*, *quality*, etc., of objects during the first few years of school life; the danger of causing arrested development in the teaching of number by overestimating the child's number sense, or number capacity; the greater interest and success which result from teaching number, at first incidentally in connection with other lessons, and of bringing into greater prominence the child's motor activity and dramatic instinct; the danger of too early insisting upon a single unit of measurement; the value of the child's natural interest in plants (flowers) and animals as a means to æsthetical culture; the changes and progress occurring in kindergarten methods, due to a better understanding of children's interests, health, and growth; the large part played by myth, fairy tale, folklore, etc., in developing the imagination, and in giving versatility and readiness of expression; etc., etc.

Of course, these suggestions are only meant to be tentative. They seem to be indicated by the present state of evidence and may be accepted as working hypotheses, but that is all. We must continue patiently to accumulate evidence, and not rest satisfied until we are sure we have the truth.

HOW MAY THE RESULTS OF CHILD STUDY BE BEST EMBODIED IN METHODS OF TEACHING IN ELEMENTARY SCHOOLS?

BY JAMES L. HUGHES, INSPECTOR OF SCHOOLS, TORONTO, ONT.

Three things are necessary in order that psychological principles may be successfully reduced to psychological practice, as they are discovered: teachers must be inspired, parents must be instructed, and the work of the home and the school must be co-ordinated.

The new revelations resulting from child study must be introduced into the schools by the teachers, and the only way they can be successfully introduced is by training teachers to be intelligently, independently, and suggestively co-operative in studying and applying new ideals. The best work a superintendent can do is to secure a right intellectual and spiritual *tendency* on the part of his teachers. His primary aim should be to define in their characters the essential elements of power which will qualify them for progressive development towards higher conditions, truer ideals, and better methods.

The most essential elements of progressive power in teachers are:

1. *Perfect Intellectual and Spiritual Freedom.* — They should be free from the conventionalities of empiricism and the bonds of restrictive ideals regarding the aims of education. Their minds should be open, not merely to admit new ideals, but to welcome them, and to apply them when convinced of their philosophical basis. They should not be dwarfed by emasculative reverence for the past. The revelation of transforming thought should not shock them. They should be grateful for truth already revealed, but supremely grateful for the ever-expanding power of the human mind that makes revealed

truth the source of greater revelations. Their eyes should be turned towards the lights above them. The movement of the race towards God has been a progressive advance towards perfect freedom. Teachers should lead the world in this triumphal march. They cannot do so properly till they are free themselves.

2. *Belief in the Law of Evolution.*—All teachers should be trained to believe in the possibility of the evolution of individual man through the successive periods of infancy, childhood, youth, and manhood, through freedom, stimulating environment, appropriate knowledge, and self-activity. They should believe, too, that, epoch after epoch, humanity should reach a better condition physically, intellectually, and spiritually, in a continuously progressive ascent from one higher stage of culture to a still higher, limiting the highest only by "the goal that touches upon infinity." There is hope for the teacher in the widening conception of the possibilities of human evolution based on reverence for the child. She is no longer a hearer of lessons, a teacher of words, or even a developer of power. She is a stimulator of life and a helper of life to higher life.

3. *A Clear Revelation of the Distinction between Development and Schooling.*—This is necessary in order that they may have a definite and logical thought basis to guide them in their work and in their continuous preparation for better work in future. Teachers should not value knowledge less; they should value the child more. The child is greater than knowledge, because it possesses elements of divinity that qualify it for progressive development towards the divine. To make the development of the child the central ideal increases our estimate of the value of knowledge by making it an element in man's evolution. Knowledge takes a subordinate place in the true ideal of a teacher, not because of the lessening of its own value, but on account of the clearer revelation of the majesty of the child. So long as the supreme aim of teachers is the communication of knowledge, their strongest desire will be to get new methods of giving knowledge easily, rapidly, and permanently. There is little inspiration in such an ideal. It restricts to the mechanism of teaching. Professional enthusiasm languishes till teachers rise beyond the ideal of schooling and grasp the wider, higher ideal of the development of the child, adopting Froebel's motto, "The renovation of life," instead of the old precept that "knowledge is power."

4. *True Faith in Themselves.*—Grateful recognition of our own power and of our responsibility for its wise use in aiding the development of the race are the strongest possible motives to intelligent and persistent efforts along new and independent lines. A teacher who has a reverent consciousness of her own power as the divinity in her, as her gift from God to be used in helping humanity in its evolutionary growth, does not require external stimulus to keep her on the alert for fresh light and truer philosophy to guide her in her work. The progress of humanity has been retarded by the failure of individuals to gain a true consciousness of their own selfhood.

The day has gone by when the superintendent's chief function was to direct his teachers, or even to instruct them in regard to their work. Inspiration is mightier than direction or instruction. Responsive activity on the part of the child to its teacher is much better than passive receptivity, but responsive activity is feeble and non-productive when compared with the true self-activity of the child. It is equally true that independent self-activity on the part of the teacher is infinitely more developing to her than activity in response to the superintendent's suggestions. The stages in the evolution of the true relationship between superintendents and teachers have been, first and lowest, direction and obedience; second, instruction and intelligent obedience; third, suggestion and co-operative activity; fourth, inspiration and co-operative self-activity. The highest power of a superintendent is to make his teachers so free that their minds will open towards new truth, as the bud opens to the dew and the light; to unfold the enchantments of the philosophy of the evolution of man, and their duty in aiding the race to rise; to

help them to gain so true a reverence for the child that they will value development more than schooling, growth to greater life more than knowledge, and, more than all else, to lead them to a consciousness of their own power and responsibility, and a conception of the sacredness of their work. When their hearts and minds are so prepared, they hunger and thirst for new light, and the fresh thought of the great leaders drops into soil so rich that it is soon revealed in improved teaching and training processes.

How can a superintendent guide his staff to such an ideal condition? By the inspiration of his addresses, by suggesting the best books relating to the child, and by organizing voluntary associations for child study. The highest result of child study up to date has been the magic transformation of the ideals of teachers in regard to their work. It is easy to create an atmosphere of interest in educational advancement when the child is made the center of investigation.

In arousing an interest on the part of teachers, I have found it a good plan to make a book of distinctively stimulating character the subject of an address to them. After an address on Preyer's "Infant Mind," when it was first translated, one hundred and ninety-two copies were at once purchased by the teachers of Toronto.

The best plan, very much the best plan, for enabling a body of teachers to grasp a new ideal is to get a few teachers in each grade (there are always leading spirits freer and more progressively self-reliant than the rest) to investigate and apply it in their own classes. Then, when they have grown to it by using it and are able to exemplify the processes based on it, grade or group conventions should be held in their class-rooms to see their processes and note their results. We devote the forenoons of such conventions to observation of actual work, and the afternoons to discussing the new ideals and processes, and relating them to past development. Teachers gain new ideals much more rapidly by seeing them applied than in any other way.

The teachers of the future should enter upon their professional work in the spirit of progress. Normal schools and all institutions for training teachers should be centers for concentrating the light and power of the new revelations of child study. Each class of students, as the years pass, should go out freer, broader, and more eager for the discovery and revelation of vital truth to transcend the old.

Complete success, both with the teachers of the present and the future, will depend on the independent, enthusiastic, self-active investigations of the teachers themselves. They must be made free from the blight of domination and inspired with self-reverence. They must become originaive as well as investigative, in order that they may grow.

It is very important that parents as far as possible be kept alive to the developments of the new educational ideals, and kept in sympathy with them. Ministers and editors should be led to study the child, so that they may aid in molding a correct public opinion. New ideals grow slowly in the face of popular prejudice. It is discouraging to have educational work along true lines of child development tested and criticised by parents and school boards with the standards of progress laid down by the old knowledge-storing ideal. Parents must be led towards the light by addresses, sermons, editorials, and the dissemination of child-study literature. More than this, they should be organized into voluntary associations for the study of the child. Churches and social organizations should be inspired with the ideal of saving men, and leading the race to higher ground and complete unity by true child development. The kindergartens are, on the whole, the best centers around which to organize society. Mothers' meetings are now the most popular school meetings. They should not be confined to mothers. They must become parents' meetings. The co-ordination of the home, the school, and the church will be the greatest work of the twentieth century.

THE "STILL HUNT."

BY MISS SARAH C. BROOKS, SUPERVISOR OF PRIMARY SCHOOLS AND KINDERGARTENS,
ST. PAUL, MINN.

(THESES.)

The teacher, burdened with numbers of pupils and the attendant discipline, instruction, and classification, is from force of circumstances inclined to think of pupils in mass, rather than as individuals. Children are classified as good or bad, bright, medium, or slow, without effort to arrive at specific reasons for the differences thus existing. This habit of considering children in the aggregate lies at the root of much of the weary grind in school work. The remedy lies in awakening the sympathetic interest of the teacher in children, which is brought about only by changing her habits of observation from mass to individual. She must learn to put herself in the place of the child and endeavor to look out upon the world from his point of view. Thus only will she do the best work for her pupils; and thus only will the problems of discipline and instruction become simplified.

MEANS.—SOME FORM OF CHILD STUDY.

Scientific method, cumbersome and unsatisfactory, because the teacher lacks scientific preparation and is embarrassed with numbers. This objection does not apply to the teachers' doing work at the request of experts for the sake of scientific investigation, but the teacher individually receives little help from the work done; especially as the conscious condition under which the child submits to tests or answers questions frequently results in incorrect data, and, even if the data may be counted upon as correct, the amount is insufficient to warrant a conclusion.

The "still hunt" is to be preferred for the following reasons:

It fosters the habit of observing the act and noting the conversation of children, out of school as well as in.

It preserves the child's unconsciousness, without which he cannot speak and act in a natural manner.

It does not restrict the field of observation.

It encourages the observer to recall her own early acts and states of mind, by the aid of which she may more intelligently interpret sayings and actions recorded of children under observation.

METHODS OF PROCEDURE.

1. Record names of pupils in a blank book. Opposite names record traits, habits, sayings of children as heard and seen in school, upon playground, and in the street.

2. Without obtrusion, observe children at play and alone, whenever opportunity affords. Make note of the most interesting data. Especially observe children of the age corresponding to pupils in room.

3. As certain pupils come into the foreground from forwardness, timidity, listlessness, inattention, or other reasons, seek every opportunity of talking these cases over with the previous teacher or kindergartner, if there be such. This is the best form of teachers' meeting.

4. Enlist the sympathies of parents in the work. It would be helpful to prepare lists of questions, as suggested by Dr. Van Liew in the "Illinois Handbooks of Child Study," Vol. I., No. 2, and, after the case has been freely discussed, put into the hands of parents to be answered and returned.

5. A study of the literature of experimental psychology, notably "The Pedagogical Seminary," Vol. I., No. 2, Vol. II., No. 3; the "Illinois Handbooks of Child Study;"

Earl Barnes' "Studies in Education;" *Popular Science Monthly*, Vols. XVI. and XVII.; and Sully's "Studies of Childhood."

RESULTS.

An awakening of both sympathetic and scientific interests; a consideration of the needs of the individual child; a modification of methods of discipline and instruction in accord with this broadened view.

CHILD STUDY IN CLASS WORK.

BY PROFESSOR L. H. GALBREATH, ILLINOIS STATE NORMAL UNIVERSITY.

(THESES.)

1. It is now commonly admitted that method in teaching should be based upon the process of learning, as exemplified in the undirected movements of the mind in acquiring knowledge, and as detected and described in psychological studies.

2. Notwithstanding this, it is a matter of easy proof that relatively few of the teachers who have studied psychology make immediate conscious use of it in guiding children in class work.

3. Mediately, however, psychology aids the teacher in furnishing a theory of the recitation; but, besides this basis for method, it should give motive and direction to the teacher for the study of her own pupils.

4. Pedagogy, also, should contribute something which should give rise to a phase of child study that might be designated with propriety as pupil study—a study of children under definite schoolroom conditions and educational influence, for the purpose of practical and educational control.

5. The requirement involved in this is a complex and difficult one, to meet which teachers need guidance, and in respect to which they are left at present, I believe, entirely to self-direction.

6. As aids to teachers in this direct and immediately serviceable study of children the following two plans are *typical*:

PLAN I.

A STUDY OF ATTENTION IN CLASS WORK.

1. Signs of attention.

a) How is attention to class work manifested, in bodily attitudes, in actions, in questions, in answers, in reproductions, or in voluntary participation? What help may come from this study?

b) Can you find any signs peculiar to individuals? What manifestations are very general? What help may come from a knowledge of the peculiarities of attention?

c) What variations in signs are discoverable in relation to time of day, to subject, to method, or to attitude of teacher?

2. Conditions of attention.

a) Are the conditions of heat, light, atmosphere, seating, and of seeing and hearing in class work, conducive to good attention? In what cases not?

b) Are the physical conditions of the child's body with respect to health, energy, degree of fatigue, and muscular activity and expression conducive to the best attention? In what cases not?

c) What social events or experiences at home, at school, or in the neighborhood affect perceptibly the attention to schoolroom duties?

d) How is attention conditioned by previous studies in school or out of school, as from reading, travel, and the like?

3. Power of attention.

a) What differences can you note in your children's ability to grasp thought? Can they attend equally well to matter of difficult interpretation.

b) What differences in intensity of attention are discernible? Is this difference noticeable in all the subjects? Does it vary with the time of day?

c) Is there a difference in the rapidity of attending to the matter of instruction? What variation is found in this?

d) Can you find any peculiarity in attention in your pupils due to "eye-mindedness," or "ear-mindedness," or other special mental type?

4. Stimuli to attention.

a) What external influences are operating to affect his attention either in direction or intensity?

b) Through what senses is he receiving the stimuli?

c) What of these are subject to control by the teacher, and what not?

d) What benefit to teacher should arise out of such study as this?

This plan is designed to direct a teacher's observations, inquiries, and reflections, while he is actively engaged in work with his pupils. To apply it successfully, young teachers, and those not well trained in inductive psychology, will need careful guidance from principals or superintendents. It is believed that a faithful daily use of this scheme, or more helpful and significant parts of it, in following the work of individuals and classes, will eventually lead to a valuable habit of mind toward pupils.

PLAN II.

A STUDY OF INTERESTS FOR LITERATURE.

1. Signs of interest in literary study.

a) How is interest in literature manifested by your pupils individually? Can you describe these signs and tell how you detected them? Have you used any special sign thus discovered in your efforts to acquaint yourself with the interest of another student? Can you classify these signs as they appear in your schools?

b) What is the earliest manifestation of the literary sense discoverable in the youngest children? How do these signs change as the pupil grows older or broadens his experience? Have you as teacher affected any change in any way?

c) Watch for signs of any abnormal and harmful interests. What leads you to think them injurious to the child? What treatment of the child would you propose?

2. Source and degree of interest in literature.

a) Does the interest arise out of the pupil's "mental make-up," or from influences at home, or requirement of regular school work? In what ways are you helped by knowing?

b) Is this interest of high, low, or medium degree of intensity? What is the basis of your judgment? Is this intensity variable? What leads to such variation? How have you affected it in any way?

c) Are any sources or degrees of interest that you discover regarded by you as peculiarly helpful or harmful to your pupils? Are the factors working thus upon the child controllable or not by parent or teacher?

3. Values of literary interests.

a) What effects from the reading of literature upon the intellectual life are discernible in any individual?

b) How many of your pupils use literature as a resort for pleasure or pastime, rest or recreation?

c) To what extent can you find the use of literature of value in school as a positive or negative force in affecting disposition, conduct, and character?

d) How do such observations and discoveries affect the spirit, energy, and method of your work with literature, if in any way?

4. Kinds of interest.

a) Are evidences indicative of a permanent or a passing interest?

b) Toward what forms of literature does the detected interest tend? Is it for "literature of power," as distinguished from "literature of knowledge"?

c) Is the interest in the literature a direct or an indirect one in the matter or in the form, in the symbol or in the thing symbolized?

d) What benefit comes from the observations and inquiry of this nature?

In this plan it is assumed that efficient teaching demands a knowledge of the pupils' interests as *individuals*, and that the chief object in literary instruction is the cultivation of this interest. It is believed, therefore, that its use in helping the teacher to ascertain the attitude, ability, and progress of her pupils through its revelations of their interests in the selections used ought to lead to better teaching. It will aid in the discovery of the needs of the children. More effective adaptations and more definite knowledge of results are likely to be secured thereby, and, moreover, in the future, better selections and adjustments of literary materials to the needs of the pupils. The teacher may be assisted by the analysis of the field for study into a closer and more careful attention, into an increased accuracy and exactness in discrimination and judgment, and into a more fruitful and sympathetic treatment of pupils. The best execution of this design will need keen, painstaking observation and wise, critical questioning. And with such a study other important information may be obtained.

CHILD STUDY WITH THE CO-OPERATION OF PARENTS.

BY PROFESSOR C. C. VAN LIEW, ILLINOIS STATE NORMAL UNIVERSITY.

One of the first values of child study to the active teacher is the more complete recognition of the individual child in school. In these days of growth away from small to large school communities there is a tendency to lose the individual in the mass, to place him within the cramping limitations of an iron system of gradations, and to make the demands of class work superior to those of the individual. The active teacher needs a constant stimulus to give the individual freedom within her system. To do this, she must *know* the individual.

Nowhere is this need greater than in the primary grades, for it is here that the child first learns to think of himself as a member of a larger social community than the family. The family was comparatively narrow in its social relations, so far as the child was concerned; here the child's individuality was most pronounced. He enters school, and its larger community life reduces the force of his individuality in proportion as the number of his associates is greater. He must, in a measure, re-establish it. The success of the teacher's first efforts here can be measured by the completeness with which she utilizes the six-year-old's home-past in establishing an easy transition to the school-present. The incipient pupils before her are widely different, because the forces and stimuli of their respective environments have differed so widely. Again, upon first entering school, they are so many strangers to the teacher, who is expected, however, to give them intelligent instruction at once. The parent who places the child in school knows a great deal about

its nature and peculiarities that would be of great service to the teacher, if she could know it.

This thought suggests a method of child study in school with the co-operation of parents, by the use of questions to parents. Perhaps the method here described is not worthy the name "child study." It can lay no claim to scientific and analytic value. It might be better to speak of it as an introduction to the study of the child. The following questions are given as illustrating certain lines of information in which the parent may be of great service to the primary teacher. The value of most of them is very obvious; yet they do not include all that might be useful, nor is it intended that all should be asked. Many valuable facts are brought out that are not sought directly in the questions.

"What sicknesses has the child passed through? Are any after-effects of these sicknesses still present (nervousness, incontinence, spasms)? Have the child's ears, eyes, or throat ever been affected? Has the child any other physical defect that you know of? Describe the child's sleep (breathing regular? restless? dreams? about what? length of sleep?). Does the child eat heartily? Especially at breakfast? Used to forenoon lunch? What does the child drink (coffee, tea, milk)? Appetite dainty or hearty; and for plain or fancy food? General health good, as seen in the play, work, power of endurance, disposition, etc.? Has the child been out of doors much? At what age? Places? Has it made any journeys? Whither? How long? At what age? In what places brought up? Where lived most of its life? Name as many striking sights that the child has seen and remembered as you can. What can you say of the child's curiosity? Reflectiveness? Talkativeness? Parents' occupation, past and present? Has the child experienced unusual events (death, fire, wedding)? Effect on the child? Who has had the chief care of the child? Any persons beside the mother? Age of these persons? From whom did the child learn to talk? One or more languages? Had many companions? Had to amuse itself largely? Character of these companions? Their influence on the child? Favorite companion? Has the child been much in the company of adults? In large gatherings of adults? Favorite plays, occupations, toys, fancies? Does it know any verses, songs? Disposition? Does it get along well with brothers, sisters, playmates? Quarrelsome? Does it like to govern, to tease? Is it generous? Has it a hasty temper? Cry easily? How does it habitually treat animals? Is it affectionate? Expressive of love? Speak truth always? Changeable in moods? Show fear of anything? What? Fond of color, beautiful pictures, stories? Easily embarrassed? Shy? Blush easily? Does it obey readily, or does it need several admonitions? Special habits or tricks, such as biting the finger nails? Persistent in carrying out undertakings? Skillful in home occupations, such as dressing, home chores, etc.? Careful and orderly with property? Ever made collections of anything (buttons, stones, stamps, etc.)? Quick and ready to act, or does it stop and think first? Right- or left-handed? Does it resemble the father or mother physically and in disposition? Which child, by number, in the family? How many brothers and sisters? Its expectations as to the future?

The value of this method of individual study may be summed up in general as follows:

1. It furthers very materially the sympathetic co-operation of school and home, of teacher and parent—a result greatly to be desired. Contrary to the expectation of many, parents have been found very appreciative of the work and its object, and have given it their hearty and candid support.
2. This work furnishes an excellent basis for the further study of the individual. Many idiosyncrasies are revealed that suggest educational problems and the need of watching their further growth and influence.
3. It furnishes the teacher with many concrete points of contact in instruction and government, something tangible in each child for the exercise of her sympathy and love.

4. A knowledge of the child's physical limitations and peculiarities, which the parent often understands and can explain, prevents the teacher's unwittingly subjecting the child to pain or chagrin.

5. The teacher learns something of the child's environment and its forces, as they have helped to shape the child, and is the better able to adapt the school environment to his needs.

6. Both parents and teachers are by this means interested from a new point of view in the general problem of the child nature and growth, and of child education.

It is not claimed that this method might not be improved or replaced by a better. It is merely presented here as suggestive. Experience has shown it to be both practical and very valuable.

SHOULD TEACHERS IN PREPARATION HAVE INSTRUCTION IN THEORETICAL AND PRACTICAL CHILD STUDY?

BY MISS MARY E. LAING, OSWEGO STATE NORMAL SCHOOL.

Allow me to re-echo a thought that has already been expressed here this evening. The young teacher must learn through investigation. She herself must study particulars and reach her conclusions through her own experience. Much of the large body of facts concerning the nature of the child, as well as the finding of means in furthering his development, she should be helped to discover for herself. From this standpoint I would like to name the practice school a teachers' laboratory.

The young teacher herself must grow; under our direction best possibilities must be developed and the individual teacher helped into conscious possession of individual power. The practice school should as truly be a place affording ideal opportunity for young teachers to grow as the schoolroom should afford ideal opportunity for right child growth. It should be a *Lehrergarten*. We have sometimes forgotten this. We have burdened the young teacher with ready-made devices and elaborate schemes; we have instructed and criticised, and too often our efforts have had the unhappy effect of directing her thought toward herself and inducing a self-consciousness detrimental to her own best development. Child study tends to turn her thoughts away from herself toward its legitimate object, and so to become an effective means in the teacher's own more natural development.

There are three factors in instruction: the teacher, the subject-matter, and the child. Work prospers as the interests of the latter are made prominent. There are no contradictions here. The teacher's true advantage is the advantage of the child, and in the proportion that she furthers the good of the child she furthers her own best good. He is the proper focus for her attention and effort; subject-matter must be adapted to his needs, and methods of presenting it to his nature; to know him is the first necessary step in knowing how to shape conditions to the desired end of his development. To this end the teacher must study the child, but let her study him with disinterested motive. That child study is best for the average teacher that is undertaken for the child's own sake; that aims to help him *now*.

Every teacher in preparation should, if possible, undertake a kind of child study that will enable her to read quickly and accurately the mental and moral characteristics of children, to note habits mental and physical, to gain, in short, a clear apprehension of present conditions in order that she may wisely shape them so as to induce best results in future growth. This work must be prepared for by the right kind of psychology—a psy-

chology that has trained her to a quick observation, not only of those mental processes involved in learning, but of mental habits and acquired conditions, of volitional or emotional manifestations which enter into the daily lives of growing children.

There is in every child, not only the present John or Mary, but also the potential child. There is for every child a best possible character to be developed. Nothing is so important to the child as the realization of this possible best in himself. Let the young teacher be trained to quickness in knowing the present child before her, that she may the more surely aid in the unfolding of that possible best.

This necessitates power in understanding individual children, and it can be most surely developed in the systematic study of individuals.

Doubtless there may be many excellent ways of doing this work. We have recently adopted the plan of asking the pupil teacher to study one child as thoroughly and exhaustively as possible, just as a pupil in science, who begins the study of insects, begins with a single individual and learns from it how to study all of its class. This study of individual traits and habits of individual children is naturally extended to the entire group of children under the young teacher's care, and she is encouraged to know these individual children as truthfully and thoroughly as possible.

The results of the work are shown in greater self-forgetfulness on the part of the young teachers, attention centering more in the children and less in themselves. As they work more directly with the children, an improved quality of work results. More sympathy between pupils and teacher is exhibited, and greater spontaneity enters into the work with this improvement in vital conditions.

We cannot doubt the power of child study to help in the solution of some of the gravest problems in the training of teachers. We may question if at no distant future we shall not wonder that we could have seriously put into interrogative form the query if teachers in preparation should have instruction in theoretical and practical child study.

ROUND TABLE ON NATIONAL TEACHERS' CERTIFICATES.

The round table on National Teachers' Certificates, conducted by Ossian H. Lang, of New York city, resulted in the adoption of a resolution to instruct the chairman to secure from the Department of Superintendence an indorsement of the following propositions:

1. Appointment of a committee to draft a report setting forth clearly and in detail what should be considered the minimum standard of professional qualifications to be required of candidates for state certificates.
2. This committee to consist of sixteen members: The United States Commissioner of Education, the present President of the N. E. A., the present President of the Department of Superintendence, four state superintendents, three state normal-school principals, two principals of local training schools, two presidents of boards of education, and two others.

The following topics were discussed by the round table:

1. National teachers' certificates may or may not be recognized by political authorities, but a universal recognition of this kind should be the end of our efforts.
2. A national teachers' certificate would be merely a diploma testifying that the holder possesses all the qualifications required by law of teachers in the state or states having the highest professional standard or standards.

3. Interstate recognition of state certificates cannot be compelled by law. It will always remain a courtesy shown by the authorities of one state to those of another. What ought to be secured is the passage of laws by the several legislative bodies empowering either the state board of examiners or the state superintendent to indorse state teachers' certificates issued by other states.

4. Practical recognition of state certificates by every school community in the state can be, and ought to be, compelled by law. This, then, would be the first definite result to be secured.

5. Before this recognition can be secured the state certificate must carry with it convincing proof that the holder possesses the highest professional qualifications required of teachers in any part of the state.

6. In order to come to an understanding as to what demands may be reasonably made upon applicants for state certificates, a clearly defined standard of professional qualification would have to be agreed upon.

The following propositions were made to get the movement under way:

That the Department of Superintendence appoint a committee to draft a report, setting forth what should be considered minimum requirements for a professional certificate.

After this report has been fully discussed and adopted by the Department of Superintendence, its indorsement by the National Educational Association, the various state teachers' associations, and the school authorities in the several states should be secured.

The next step would be the incorporation of its main provisions into the school laws of every state in the Union.

The state normal schools should then arrange their courses of study in accordance with these provisions, and be made the only institutions qualified to issue teachers' certificates to their graduates.

All who are not graduates of these schools should be examined by a state board of examiners, made up principally of representatives of the state normal schools, and certificates issued to them.

Every certificate of this kind should be valid for at least three years.

After the possessor of this certificate has taught three years and fully demonstrated his fitness for school work, a life certificate ought to be issued to him upon an application to the state superintendent, indorsed by the state examiners and the superintendent under whom he has taught.

The holders of life certificates should then be required to register their names in the counties in which they are employed, and appointments and promotions may then be made from these lists without any further examinations, upon the recommendation of the local superintendent to the board of education.

As soon as all states have come to an agreement as to the requirements for a professional life diploma, the United States commissioner should be empowered to indorse the life diploma, and by his signature give it a national character.

The difficulties involved in the propositions offered by Mr. Lang were discussed by the following:

State Superintendent J. Q. Emory of Wisconsin; State Superintendent N. C. Schaeffer of Pennsylvania; State Superintendent W. W. Stetson of Maine; Superintendent E. A. Jones, of Massillon, O.; State Superintendent D. M. Geeting of Indiana; Dr. Ida C. Bender, Supervisor of Primary Schools, Buffalo, N. Y.; State Superintendent Chas. R. Skinner of New York; Dr. W. N. Hailmann, Supervisor of Indian Education, Washington, D. C.; John MacDonald, Editor *Western School Journal*; State Superintendent John Kirk of Missouri; Superintendent C. J. Pearse, of Omaha, Neb., and others.

ROUND TABLE ON LIBRARIES.

In the absence of Melvil Dewey, the round table was conducted, at the request of President Gilbert, by J. H. Van Sickle, of Denver, the Vice-President of the Library Department of the N. E. A. Miss Mary E. Ahern, of Chicago, acted as secretary. The discussion was opened by Mr. F. M. Crunden, Librarian of the Public Library of St. Louis, Mo. The subjects were as follows: (1) The reading of teachers. (2) The proper function of the national library as a part of the American educational system. What it might do to assist schools and libraries throughout the country. (3) Practical help to the evolution of book borrowing with book owning. (4) The functions of the schools in training readers for the public library. (5) Using books *vs.* reading books.

MR. CRUNDEN said that in many cases the teacher was the only source of inspiration that children met; therefore it was important that this fountain head should be clear, pure, and fresh in its contents. What a teacher is in himself is more important than what he gives out. He should keep up with current ideas, which, after all, are the old thoughts in new form.

MR. F. A. HUTCHINS, Library Clerk of the Office of Superintendent of Public Instruction of Wisconsin, said: Teachers should be thoroughly familiar with the great children's classics, and should enjoy them so thoroughly that they can inspire a love for these classics in the breasts of all their pupils. The school libraries will not do their best work until we have a generation of teachers who have been reared from childhood in homes and schools where the best books are habitually read. The teacher who has done very little reading can well afford to begin with the children's classics for other reasons than to be better able to help her pupils.

In Madison, Wis., where pupils of the lower grades are furnished free text-books, they are required to buy the books used for supplementary reading. Each pupil purchases two or three books each year, which are read in class. Among these volumes are Scudder's "Fables and Folk Stories," Ruskin's "King of the Golden River," Eggleston's "First Book in American History," "The Wonder Book," "Evangeline," and "Snow Bound." The child who has spent eight years in the lower grades of the Madison schools has, therefore, gathered a choice library of the children's classics. The booksellers in that city sell now large quantities of such books, but have lost as large a sale of the books of Optic, Castlemon, *et al.*

SUPERINTENDENT WOODS, of Michigan City, Ind., said that teachers of the present day were sadly deficient in knowledge of children's books, or of what children ought to read, because they themselves were not taught what such books should be.

J. H. MILLER, Editor *Northwestern Journal of Education*, Lincoln, Neb., said he was opposed to reading for teachers as such. They are men and women, and should read just what other people do. He observed teachers to be tireless readers, but their reading was too professional. They should read what other people of culture read. He thought normal schools and colleges should teach how to read for the soul of literature, and not for so much dissection.

ALBERT E. WINSHIP, Editor *Journal of Education*, Boston, Mass.—There are some people, old and young, who will never read; there are many who can easily be made to read too much. It is possible to read too many books, even good books. The Sunday-school library, and even the public library, sometimes bring to the young people too

many books for their mental development. We need to emphasize the use of Books rather than the reading of books.

Books used for information are to be consulted, not read. It is a pedagogical crime for a child to study geography, history, literature, science, as though the book he was studying had all the information he needed. One great mission of the school is to teach children that no information is reliable that he does not get from the latest authorities. More and more do the libraries need to furnish accommodations for students to go directly to their shelves for reference books in various subjects.

Books, to be of professional service, should be owned. One good book owned and lived with is worth more than five books taken from a library and read as one takes in scenery from a car window.

Books for culture should, even more than for professional service, be owned and companioned with. One needs his own Shakespeare, Lowell, Holmes, Irving, as he needs his own toilet case, to which he goes knowing it is always ready for personally toning up thought and sentiment. One reading of a play, poem, or work of fiction is of little more value than to have had the loan of a watch for an hour; it is all well while you have it, but for service it needs to be consulted when one wishes to bring himself up to the standard.

A professional book or a classic is to be used a hundred times where it is read once. Hunt through its pages for a pet couplet that you need, and you will see a score of others that you will need at another time.

The reading circle's greatest mission is the insistence that teachers buy a few books each year and use them until they are not willing to part with them. Sets of books, like the "International Educational Series" of the Appletons, or the new inexpensive set of British and American Masterpieces of Houghton, Mifflin & Co., are a constant inspiration for teachers to buy as fast as they are able — books upon whose value they can depend, because they are in a standard series.

Lawyers, physicians, editors, clergymen use books in their own way; teachers must have a way of their own — using rather than reading books, going to the latest sources of information and companioning with professional and literary masterpieces. Much more could be done for teachers by librarians than is being done. Librarians need to get closer to the teachers and not get off by themselves, putting up barriers to keep the teachers out. Teachers are afraid of librarians. I was afraid of them myself. I believe no one can love and understand a good book who depends on the library for it.

MARY E. AHERN spoke next in defense of the librarians. She thought Dr. Winship could not know of the work being done for the schools and teachers in Massachusetts by Librarians Putnam, Green, Cutter, Jones, and a score of others, or he would not be so severe. Librarians have been literally chasing teachers for twenty years, trying to do them good. They are coming close together, and the change from reading as a task to reading as a delight is due to their united efforts.

By request, Mr. Van Sickle spoke of the work of the Denver Public Library in connection with the schools of that city. Teachers are allowed to take to their schoolrooms a large number of books and to keep them for several weeks or months, if they choose. The shelves of the library are accessible at all times to teachers and pupils. The children's room is a feature of great popularity. Each child may help himself to any book on the shelves.

In some of the schools this plan is carried out on a smaller scale, each room being supplied with fifty books, carefully selected with reference to the age of the children. The children move on from room to room when promoted, and are brought in contact with another set of books new to them.

SUPERINTENDENT CARTER, of Danville, Ill., advocated putting everything into the public library. His teachers sent to the library for the books wanted and were supplied by means of duplicates, which were bought by the school board; had as many as necessary, and kept them as long as needed.

MR. CRUNDEN, speaking of the function of the library in relation to the public schools, said it was better to learn to love books than to know their contents and hate them. Let there be reading for pleasure in schools, not all for a task. Then will students come out with a taste for good books. Often the reading is so dull and poor in school that stimulants are needed to get them to read at all afterwards. A good book is an open door to life and the development of the mind.

MR. AUGUST F. FOERSTE, Teacher of Physics in the Steele High School, Dayton, O.—In some of the larger city libraries the books on the various sciences, whether in the line of natural history or of physics, chemistry, and the like, are too exclusively of service to the very few, to the specialists, or those having had higher courses of training. Too great emphasis cannot be laid upon the fact that these libraries are mainly for the general public, and that the most careful selection should be made of such books as would be of value to those who have not had previous training.

The teachers of the high school and others should be encouraged to prepare lists of books in the library of especial value for the study of special topics in their own line of work in the schoolroom. Such lists might be recorded in the form of a card catalogue, and would serve as a guide to the librarian while selecting books for pupils eager to continue in these lines of investigation, and to pursue them farther than in the schoolroom. The preparation of such lists will often reveal the weaknesses of a library and lead to filling-in of the gaps discovered.

All references should be made, not only to authors and titles of books, but even to chapters and pages. This saves time and teaches the use of books as sources of information.

ROUND TABLE OF STATE SUPERINTENDENTS.

WHAT SHOULD THE STATE SUPERINTENDENTS DO AT THE SUMMER INSTITUTES?

BY S. M. INGLIS, STATE SUPERINTENDENT, ILLINOIS.

The summer institute is, in a measure, the seed time of the school year for the rural schools—the time when the teachers gather to seek the necessary preparation for the work of the approaching fall and winter campaign.

It is an opportunity afforded the wide-awake county superintendent for doing some of his most vigorous and efficient work of the entire year. His supply corps of institute instructors can be brought to bear, and his own counsel, fresh in a large measure and ripe with the added experience of the past year.

If these elements are used judiciously, the summer institutes may be a means of valuable support to the teachers attending, a prolific source of inspiration and enthusiasm, and fairly and fully pay for the time spent and the money expended.

The state superintendent has his share to do in the summer school preparation, but it must not be forgotten that his is only advisory, while, at the same time, it may be a

re-enforcement to other means that may prove very valuable in the certain progress of the school work of the entire state.

He should see to it that these institute instructors are doing good work.

The school law of Illinois requires a high grade of professional instruction for the teachers of each county, for at least one week in every year. That law collects a fund to defray the expenses of the annual institute.

The teachers supply that fund, and they are entitled to such expenditure of it as will be most helpful to them in their occupation. The necessity for the annual institute was perceived by those who secured the enactment of the law, and the need of having its limited time given to such instructors only as are able to lift the teachers into a capability for greater usefulness is certainly yet felt keenly in some counties of Illinois and, I doubt not, of other states.

The annual, or summer, institute may be made a means of instructing, strengthening, and inspiring the teachers of a county, or it may be so conducted as to enervate those who attend.

If the pressure which the county superintendent of schools can so readily employ by insinuation and implication be used to enforce the attendance of teachers on the exercises of feeble or erratic instructors, the result must be a twofold injury.

The teacher will lose the spirit of freedom and dignity which a sense of coercion destroys. And as the teacher cannot develop well in his pupil that which is wanting in himself, constrained attendance on poor institutes will degrade our schools.

Moreover, when the work done is inferior, the teachers will conclude that they are stronger than their instructors, and that further effort at real improvement is unnecessary.

The lawmakers of Illinois intended to guard against the employment of unfit instructors in the annual institutes, and, to this end, provided that the county superintendent of schools, "with the concurrence of the state superintendent of public instruction, shall procure such assistance as may be necessary to conduct said institutes at such time as the schools of the county are generally closed."

It is customary in Illinois for the state superintendent to issue license to give instruction in institutes, to those whom he knows, from personal acquaintance, to be well qualified, and to those bearing proper testimonials of worthiness.

The possession of this license enables the worker to receive, lawfully, compensation for his services as instructor in institutes.

But the granting of a license, and the recommending of a suitable instructor, occasionally, to inquiring county superintendents, fill the measure of the duty of the state superintendent in concurring with the county superintendent in employing institute instructors.

So far as the personal acquaintance of the state superintendent extends, or the recommendations of applicants are given by very conscientious and disinterested persons, he is satisfied that he can reasonably indorse the holder of the license.

But, sometimes, the county superintendent, judging from his own criterion of fitness or obligation alone, arranges to employ those who do not hold the license of the State Department; and, having made such arrangement, he feels under obligation to obtain the recommendations which would secure license for those whom he had employed. This is not by any means an impossible task for a county superintendent.

As a consequence, some persons who are not well qualified have been authorized to give instruction in institutes. Other states than Illinois that have adopted the custom of issuing state license to instructors in teachers' institutes know whereof I speak.

It is only with the hearty co-operation of all the county superintendents of a state that the state superintendent can hope to keep unworthy holders of institute license at a minimum.

The licensing authority, and the recommendation on which the licenses are issued, should be kept as distinct as possible from the employing power.

I do not mean that a county superintendent should not recommend anyone as worthy to receive an institute instructor's license. Often his recommendation will be among the most valuable; but he should not be expected to recommend for this license anyone whom he has in immediate prospect for employment in his institute.

Then, if the county superintendent declines to employ anyone who, he is assured, has not the indorsement of the state superintendent for such work, some aspirants may fail to secure employment. The institute may not be injured thereby in the least.

It would be exceedingly fortunate for all concerned if no one who recommends an applicant for institute license would permit any consideration to influence him to write what he would hesitate to be held responsible for when the indorsement is given a literal interpretation.

The millennium is not yet here, and we must not expect what we cannot realize.

If those who furnish testimonials on which a license is issued, and those who employ instructors for their institutes, would be guided in their action by the consideration only of what is best, professionally, for the teachers who attend the institutes, often at a great sacrifice, it will be possible for the summer institutes to effect an improvement in the teaching force of the state which will be rapid and decisive — an improvement which the institute law contemplates.

We trust that the day is not far distant when the intrinsic value of our institute instructors will be so enhanced, and the scholarship of our teachers be such, that academic instruction and details of method will not be so much needed as revival of spirit and practical grasp of underlying principles.

Second, the state superintendent should lecture to the teachers on some topic particularly appropriate to their work.

He should impress upon them emphatically the necessity of feeling very sensibly the need of the presence of the age in which they are living and laboring — that they are the units that make up the aggregate of human society; that each age makes special demands upon the men and women that belong to it, in strict accord with their environments; that the tinsel and pageantry of a superstitious past have yielded to intrinsic worth and substantial advancement; that the ideal has given birth to the real, and they must keep pace with the times in which they live, and bend their every effort towards still greater achievement in art and science, in training a citizenship for the higher plateaus of possibilities.

The teachers must recognize that the age demands a more practical education than was needed in the musty past; that every department needs the best; that every age has its work, every man his mission, and that truth is the great moral lever in action.

They must know and realize that the man for this age must understand the times in which he lives, the changes of passing objects, and the multiplied operations of man in his everyday encounters; that he who lacks this knowledge and cares to know nothing of the future is not fitted to play any conspicuous part in the drama of the present age.

Most earnestly must we impress the teachers with the fact that this is an age of objective activity; that everyone of worth is alive with a pardonable excitement; that all others are regarded as drones, and are driven from the busy hive, and crushed by the denizens of progress; that the very watchword of the age is *Progress*, and that everyone must do his duty or fall before the victorious millions, in this ever-restless world.

The teacher must feel that every man, woman, and child is a common factor in the great workshop of life; he must realize that he must be a student; that, should he desire to fan the Promethean spark, latent in the hearts of his pupils, and inspire them for achievement in the world of thought, he must willingly tread the fiery furnace of faith in

the prose, poetry, and philosophy of the fathers; that the age demands scholarship in the instruction of the youth of today, and the teacher who lightly regards this demand must step down and out of the magic circle; that our greatest need in the educational world is for more men to explore its broad acres, climb to its dizzy heights, and tunnel to its deepest depths.

I would not forget, in these talks, to impress upon the teacher the necessity of teaching a Supreme Being in the moral ethics of the schoolroom, and his obligation to enforce this teaching by both precept and example.

Science, history, language, every branch of study in the curriculum of the school work, dictate this vital truth. The teacher cannot avoid the conviction of such a truth; dare not, if he would, evade the duty to teach it.

I would not forget to encourage the teachers to discipline the pupils to self-control; to train them in the habit of right acting; to develop in them mental power; to lead them up to noble manhood; to inspire them for achievement, reminding them that minds only are immortal; that the marble obelisk may crumble into dust, but that the teacher's work endures.

Third, the state superintendent should address the *patrons*.

An evening during the week, or a portion of a day, should be devoted to this purpose.

The superintendent may devote a portion of the time in showing that, as Americans, we are a nation of homes, that the pivotal point about which revolve the cycles of progress outward and upward is emphatically the home, be it ever so humble in its modest environments, or ever so high in the scale of propitious appointments.

The people should be brought to realize that from the home come legislators, governors, presidents; our consuls and ministers to foreign courts, hence our character abroad; our statesmen and philanthropists, hence our safety at home; our literary men and women, hence our intellectual power and position among nations; yes, that the home is the nucleus about which cluster our prophecies, our fondest hopes of success; it is where our faith is strengthened, and whence it is winged to higher flights of destiny.

The citizens should remember that in the home the education of the child begins, either for good or for bad; its first teachers are its parents—the mother standing pre-eminent; this is the mind-formative period, when disposition and character are shaped.

Home training is unconscious tuition, and we should recognize that the plastic nature of the child is molded into shape largely by its surroundings; hence the people should be taught to shape the surroundings properly before they can shift their responsibility.

The force of the mother's will, under the intelligent guidance of educational principles and of restraints of conscience, stimulates growth. The simple environments of the child are its instructors, exciting its curiosity, and imparting to its growing mind ideas that are to constitute its stock in trade in its life work. Here it begins, here it increases its vocabulary under the further guidance of the schoolmaster. This must be made apparent to the people, that they may be able to grasp their duty in the education of the masses. The state superintendent will faithfully admonish his constituency to this end.

A representative democracy demands an intelligent constituency.

For this purpose the public-school system has been created, and the schoolmaster is abroad in the land—largely, in the country, not to prove his skill in educational tactics by his power to wield the cat-o-nine-tails, but to build a noble character; not to cram the mind with dry and burdensome facts, but to set on fire the soul, that it may burn and purge away the dross, and see only the prevailing truth.

We should see that the masses of the patrons understand that the school is not to propagate speculative philosophy, but to teach the boys and girls the practical truth with which they may bridge the valleys of discontent, tunnel the mountains of difficulty, and

through the arts of peace and the pulsations of trade bring happiness and pour the horn of plenty into every home.

The people should comprehend fully that public-school training increases the capacity of youth to grasp and grapple with the great problems of life in a manly and a womanly way, thereby adding materially to the great push of progress, and giving hard and telling blows to threatening forms of error.

Especial attention should be directed to the environments of the school buildings, the preparation and keeping of the grounds, the sanitary advantages, that physical growth may be fostered, that mental power may be stimulated, and that the moral ethics of the schoolroom may be enhanced in value.

We should incite the citizens to cherish the public school as the palladium of our safety, the fortress of our success as a nation.

At these meetings of the summer institutes the state superintendent should insist upon friendly relations between the patrons and the teachers, brought about by frequent visitation to the little college, peopled with the growing and curious children.

They must recognize that such visits promote mutual friendship between parent and teacher, securing order, adjusting difficulties, often allaying sore grievances, softening prejudices—in short, securing obedience in the schoolroom, and reverence for civil law.

Patrons should be in sympathy with the idea that the labors in the home must be in harmony with those in the school.

When a distinguished writer said, "God be thanked for the gift of mothers and schoolmasters," he expressed a common sentiment with us all.

As state superintendents we may be efficient at the summer institutes in promoting a healthy growth in favor of the public-school system, its enlargement and its permanent power in promoting a positive Christian civilization.

The sacred influence of home and childhood ever follows us in our busy life; the consecrated recollections of a mother's love and confidence ever brightens our pathway.

But the next place in the human heart is always reserved for the devoted teacher.

Many a loving mother has pressed the hand of a faithful, self-denying, patient teacher, and called down the blessing of God upon him—upon her—for having brought back a wayward son or daughter to the path of duty and rectitude.

Again, the state superintendent should arrange with the county superintendent to have a part of one of the institute days devoted to a talk with the school officers of the county, encouraging mass meetings of these officials: treasurers, trustees, directors, etc., for the purpose of discussing school matters and the relation of the school law to their duties.

In these summer institutes the state superintendent has a golden opportunity. He may emphasize the necessity of discharging *every* obligation studiously; may make clear the several duties and functions of their respective offices, and lead them to feel that they *also* have responsibilities to subserve the interests of the state.

These officers should, at times, read papers themselves, and engage in the discussion of such topics as will contribute to a better comprehension of their duties.

Distance from the law-making power and the indifference of subordinate *executors* of the law are two elements of weakness that must be met in the solution of the rural-school problem—a problem that the statesman must solve successfully or suffer the pangs of an illiteracy, coupled with rank superstition, both common foes to an intelligent suffrage, and certainly suicidal to any nation that fosters or nourishes them by simple neglect to apply the corrective panacea.

The state superintendent can do much to remedy these existing evils that tend to weaken the efficiency of the rural schools.

The necessary tools with which the average school director must labor should be

freely and cheerfully furnished by the proper authority. The state must not be parsimonious in provisions made along this line, or it may result in a "penny-wise and pound-foolish" policy.

He should point out the defects and firmly insist upon the course of action that will bring about radical changes for the betterment of the country school.

Attendance may be improved by cultivating a taste for the artistic-aesthetical, making the school-home environments attractive; this by building better schoolhouses (in many cases), fencing the grounds and painting the fence; planting shade trees, surrounding the school home with ornate shrubbery; supplying the home with a good well of water, a crystal tide of temperance beverage; providing the district with plenty of good reference books, with an excellent library, selected with a view to the culture of the children, along the lines of moral teaching: honesty, honor, temperance, *good habits*, personal sympathy, kindness to their fellows, and a disposition, deep-seated, to live for the constant up-building of society.

A hundred other things will the observing and faithful state superintendent suggest to those who are put in charge of the rural schools. The summer institute may thus become a prolific source of benefit to the country school work. But the greatest need, after all, that we should urge upon the school official is the selection of the best teachers for the money in hand—teachers thoroughly versed in the science and art of pedagogy, the principles and methods of teaching, and strongly endowed with *common sense*, known in the vulgate of our everyday verbiage as "*gumption*;" teachers who will study and investigate, but not be swerved from the higher path of duty by every whiff of newly spun theory, covered with glass, but false when sifted to the bottom.

These are a few of the things that may be done by the state superintendent of public instruction when attending the summer institutes.

An "inspiration" may be gathered by all concerned; indifference will be changed to interest; the best teachers will be secured for the schools, and they will be paid the best salary afforded, even at some sacrifice, it may be thought. Culture and intellectual power and moral status will rise in value far above a minimum; the boy and the girl of today will make the man and the woman of the future, a noble specimen of American manhood and womanhood.

SCHOOL ARCHITECTURE.

BY JASON E. HAMMOND, STATE SUPERINTENDENT, LANSING, MICH.

Like a bit of fresh air coming through an open window into an ill-ventilated room, within the last decade there has swept over all our land, penetrating even into the rural districts, the first breath of a growing interest in the sanitary conditions of our schoolhouses, conditions which have so much to do with the health of our future citizens who, in many places, are spending one-half of their waking hours in poorly ventilated, badly lighted, and uncleanly schoolrooms.

It is no exaggeration to say that much of the alarming increase in defective vision may be charged to this source, as also that the delicate lung tissues are permanently injured and the whole system weakened by this daily inhalation of vitiated air, at a time, too, when the child should be laying a firm foundation for physical as well as mental development. Thus it is that no one of the numerous things demanding a state superintendent's attention is of greater importance than this question of modernizing our school architecture.

Realizing this, it has been the policy of my predecessor in Michigan, not only to fan this growing interest into a steady and ever-increasing current by personal exhortation as he went about among patrons, but two years ago this little pamphlet was prepared under my supervision, as Mr. Pattengill's deputy, and scattered broadcast by the State Department. It is entitled "School Grounds, Schoolhouse Architecture, and Outbuildings," and perhaps I can make no better use of the short time accorded me on this programme than by giving you some idea of the contents.

After an introduction, which calls attention to the greatest necessity for reform in this regard, we find the object of the pamphlet set forth as follows :

We are, through the kindness and study of a wide-awake young architect, Earl H. Mead, of Lansing, able to give sketches of several school buildings that may be built at but little more expense than the regulation, rectangular, non-ventilated, inconvenient rural schoolhouses of today.

In planning these buildings the architect has had in mind what every board should insist upon, *vis.*, good lighting and good ventilation. Besides these two great essentials, there are many little accessories that make no extra expense, but render the building a thousandfold more convenient and comfortable. It is usually best to secure details of the plans from the architect, for the guidance of the builder, and to insure satisfaction. Architects, however, frequently overlook many things which to the teachers are of vital importance. We give herewith some miscellaneous suggestions to be considered by those about to build schoolhouses :

1. The window lighting surface should equal one-fifth of the floor surface.
2. No pupil should sit further from the window than two and one-half times the distance from the floor to the top of the window.
3. The window should extend to the ceiling, only leaving enough room for the casing between the opening and the ceiling.
4. The windows should be grouped.
5. Light is better from both sides than from one side and the back. The light at the back, unless high, will cast the pupil's shadow on his work.
6. There should be no windows for pupils to face.
7. Light from one side should be from the left, so as not to throw the shadow of the pupil's hand upon his work.
8. The windows should be provided with green shades ; yellow is not as good for the eyes.
9. The blackboards should not have a glossy surface.
10. If windows are grouped as they should be, and as they are in the accompanying sketches, *no blackboards come between windows* to try the eyes of the pupils.

The pamphlet also contains some practical suggestions regarding heating and ventilating, as follows :

1. A wood furnace is the cheapest and best means of heating small schoolhouses where wood is abundant. The furnace heats and ventilates, and will burn long wood, knots, branches, etc., that cannot be used in a stove.
2. A jacketed stove is the next best heater and ventilator. A round, tall stove should be encased by a sheet-iron jacket, the jacket being placed four or six inches from the stove. The jacket should reach within two inches of the floor and extend to top of stove. Air conductors, 6 x 12 inches, should lead from the wall on two opposite sides of the schoolhouse under the floor and open into a register immediately under the stove. This furnishes fresh air. Dampers can be placed in these ducts to regulate the amount of fresh air. A good stove and jacket can be bought for \$25 to \$40.
3. The chimney should extend to the ground and contain a flue two feet square, with either a brick partition, dividing it into two parts, or an eight-inch chimney tile for a smoke flue. This smoke flue warms the shaft, creates a current upward, and thus the impure air of the room may be drawn off.
4. Flues built into walls without provision for warming them are merely monuments to fools.
5. Place a large register in the room at base of chimney, and also one in the chimney near the ceiling. Let both be provided with valves with which to close them when necessary.
6. Place a ventilator in ceiling of room near the center, opening into the attic.
7. Hang windows with cords and weights, if possible, or at least make them easy of movement, and supplied with easy catches at lifts of short intervals. Place a five-inch board under lower sash of window, just as long as window is wide. This will create a space between upper and lower sash, through which the air can come in without direct draft on pupils.
8. Occasionally open doors and windows, and let the air change while pupils are marching or exercising.

Mr. Mead's sketches include a representation of both exterior and interior of four one-room buildings, three two-room buildings, and one of four rooms, besides the new high-school building at Iron Mountain. These are intended to be suggestive, and school

officers desiring any modification of these plans or any designs for houses of different size, or any who wish detailed drawings and specifications, are invited to communicate with the architect. The number of inquiries he received in response to this invitation, and the demand for these pamphlets, have given sure proof that our seed was not sown in vain.

True, it might seem to the mere casual observer that the results of this effort have been but meager, since only a small per cent. of our new rural school buildings have been patterned after these strictly modern plans. But a more minute investigation reveals a great improvement in the location of windows and blackboards, in the floor space, ventilation, seating, and many minor details of our recently built schoolhouses. Thus, indirectly, much good has resulted, and we hope to keep the ball rolling till the day shall come when none but model school buildings are erected in Michigan.

Among the miscellaneous suggestions of our booklet you will find attention called to the following important, but oft-neglected things:

MISCELLANEOUS.

1. Wardrobes for country schools are better made of wainscoting six or eight feet high, at both sides of entrance door, in the schoolroom. Those old entries are great breeders of disorder.
2. The girls and boys should have separate wardrobes.
3. *The teacher's desk should be in the opposite end of the room from the entrance.*
4. The end of the room opposite the entrance should have no windows.
5. The blackboard should extend across the end of the room back of the teacher's desk and down each side to the windows. It will do no harm to run the blackboard the length of both sides as well as one end.
6. If necessary, stand over the builder with a club to make him put the blackboards low enough for the little people. The side boards should be within two feet of the floor, and made four feet wide. The end board should be six feet wide.
7. The floor should be of narrow and well-seasoned maple. Don't put in a soft-wood floor.
8. Provide a neat woodbox, if no fuel room is given.
9. Provide at least one extra chair for a chance visitor.
10. There should be an average of sixteen square feet of floor space to each pupil. A little increase in the dimensions of the building does not add materially to the expense, but adds much to health and comfort of pupils.

Any of the one-room buildings represented on the succeeding pages may be built for from \$600 to \$1,000. The two-room buildings may be built for \$1,000 to \$1,600, and the three-room buildings should not cost more than \$3,000. Designs are furnished with a view to cheapness, convenience, and durability, taking into consideration the principles on heating, lighting, and ventilating given in this report.

Several pages of the pamphlet are devoted to a feature of school sanitation which is, perhaps, the most important, as it surely is the most neglected, of all.

SCHOOL OUTHOUSES.

An entire volume might be written on the topic of school outhouses. Conversation with nearly every school commissioner of the state, with many teachers and school officers, has compelled us to believe that the condition of these buildings in the average country district and in too many villages is deplorable indeed.

They are frequently very inadequate in size, injudiciously located, shabbily constructed, horribly kept, shamefully marked with obscene characters and writing, seething with vileness, abounding in filth. They stand as damning evidence of the carelessness and criminal negligence of somebody. The civilization of the most debased tribe of Darkest Africa can show no condition of affairs worse than are these surroundings of the schools where so many of our future citizens are receiving their education.

This phase of the subject would seem sufficient to arouse every person who has in his breast a pure thought, or who wishes his country well; but there are other reasons why the reform in this direction should be immediate and thorough. We refer to the health of our children. Thanks to the vigorous and intelligent labors of boards of health, our people are coming to see more clearly the necessity of cleanliness. Even the most narrow-minded are learning the lesson that a few cents saved in preventing disease is far more economical than spending large sums of money and valuable time in curing the disease that comes as the result of negligence and from the stupid violation of the most simple rules.

Then follows a detailed account of the various abuses connected with this subject, suggesting a remedy for the same; and it is most gratifying to note from the reports of our county commissioners that far greater attention is being given to the sanitary con-

dition of school premises, and that school officers in our rural districts are awakening to their duty in this regard. Still, the cases are not few in which no effort whatever is made by negligent officials to remedy the evils brought to their notice by progressive county commissioners.

Both the health and morals of our boys and girls require a crusade in this direction. Notwithstanding our introductory statement that there is a growing interest in school sanitation, it is true of this, as of every reform, that progress is slow. So it is only by persistent, never-ceasing, and long-continued effort along this line that we shall some day approximate to an ideal environment for the pupils of our public schools; and it is imperative that we who have accepted responsible positions in our educational system shall see to it that the gradually rising tide of public opinion is taken at the flood and made to assist in our efforts at reform in this direction.

ROUND TABLE ON COLLEGE-ENTRANCE REQUIREMENTS.

The meeting was called to order at 2:30 P. M., February 16, 1897, by A. F. Nightingale, Superintendent of High Schools, Chicago. The chair appointed as secretary Dr. James E. Russell, Professor of Philosophy and Pedagogy in the University of Colorado. The following is a partial report of the proceedings:

CHAIRMAN'S ADDRESS.

BY DR. A. F. NIGHTINGALE, SUPERINTENDENT OF HIGH SCHOOLS, CHICAGO.

We are assembled this afternoon for a discussion, which I hope may be more practical than theoretical, of the very burning question of a closer union between the secondary schools and the colleges, on the basis of an appropriate uniformity in college-entrance requirements.

As a leader in this round table conference, I do not deem it my duty, nor do I assume it my privilege, to air my personal views, or to limit in any way the full freedom of debate. The questions before us strike at the very root of the matter. Are the colleges to be the dictators as to the subjects taught and the ground covered in all secondary schools whose pupils may ask a higher education, or are the public high schools to be allowed in a four-years' course to supplement the work of the grammar schools along lines best adapted to individual pupils, and find the colleges ready to receive their products, to give them a deeper, richer cultivation?

Personally I have no doubt as to the issue. The high schools of this country are established and maintained by public taxation, for the one grand purpose of giving to pupils of from fourteen to eighteen years of age the very best equipment for life which their capacity and their aptitudes in those years of development will permit, without special regard to that higher education, of inestimable value, which the colleges and universities furnish to the few who may be influenced to strive for this larger legacy, a legacy which will be coveted in the future in the ratio of its adaptability to the talents of those young people, and of the cordiality with which their credentials are received as they knock at the doors of the college.

The recent discussions in the associations of New England, the Middle and the North Central states, which have lifted them out of the traditional conservatism of an effete past; the attitude of Harvard University; the advanced position of Cornell Uni-

versity—indeed the whole trend of educational thought in this and other countries gives us the assurance of larger liberty in courses of instruction.

We are living in no cloister period of human thought. Bars and bolts are found no longer upon the sources of human intelligence; we have emerged from the dullness and darkness of mediævalism, and it is futile longer to argue for the maintenance of its claims. When the history of higher education shall have been written, it will be found that not until after the middle of the century now closing was there acknowledged to be more than one path leading to the summit of the hill of learning, and those who became great as the thinkers and leaders in the development and practical application of science became so in spite of the universities, and because the Infinite Architect of mind and matter gave to these souls those talents which, through self-activity, blossomed and bore fruitage for the world's need, while the great institutions of learning were still feeding all their students upon an unvarying diet, suited to some, but ill-adapted to many, and careless of the great revolutions that were going on in the domain of nature, by which its powers were being adapted by the few to the world's rapid enlightenment and advancement.

I am not so blind to the varying capacities of our young people; I am not so deaf to their cries for food suited to their digestive organs; I am not so out of touch with my environments as a humble educator in a neighboring city, as not to see and hear and feel the pathos and potency of the great evolution that is going on in our educational theory, that shall make the development of the individual, and not of the mass, the shibboleth of our institutions of learning as we cross the threshold of the twentieth century.

We are living in an era of unshackled thought, of man's immortal personality, an era that no longer compels genuflections at the altars of the ancient, simply as ancient, but one that inspires man as an individual to learn the use of the weapons that God has placed in the particular arsenal of his brain, and to keep them burnished and sharpened for his engagement in the conflict of life. Only that knowledge that can be assimilated and appropriated becomes real education. The discipline alone, the simple unfolding of the mental faculties, is not all of education, but in the process of that unfolding the mind should garner the largest possible amount of potential, useful knowledge. The lines of demarkation between those studies once lauded as disciplinary and those scoffed at as informational are obliterated. All informational studies are now disciplinary, if properly pursued, and all disciplinary studies are informational, if rightly appreciated. It was said long ago that "education is power," and power can come only through the growth and training of those talents of God's endowment; no process of man's inoculation can educate what does not exist, and it is high time that we should recognize in all our schools the inequalities of natural endowments, and adapt our instruction to the capacities of the individual child. We differentiate too late rather than too early; we crush when we ought to uplift; we discourage when we ought to inspire.

I will allow no one to excel me in his appreciation of the intellectual results of long-continued application to the traditional subjects. I believe language study to be fundamental to the broad culture of most students. No better instruction probably has ever been devised for the highest production of mind power than that imparted, I may say, in the ancient languages, and yet my experience of thirty years has taught me that to compel all students to pursue them for any extended time leads to a discouragement that causes many to forego a good education which they might otherwise secure. These mental gymnastics denominated mathematics are invaluable. It is an exact science, and its study by those capable of comprehending the close analysis demanded marvelously develops the power of reasoning and acute discrimination; but shall all pupils who seem to be born without mathematical faculty, and yet are bright in language, thirst for history, and delight in science, be deprived of their share of the inheritance of all the ages?

I am not wholly out of harmony with the agitation of the past few years for better instruction in the English language, and yet I am far from being persuaded that good grammarians and good rhetoricians are made through the study of English *per se*.

The influence of another language to accompany the English is invaluable and everywhere recognized. In the acquisition of a good vocabulary, in the cultivation of the habit to appreciate nice distinctions in the use of words, and in the mastery of choice expression, the study of Latin is a larger factor than that of English. In the teaching of English in our secondary schools we are aping the colleges, instead of preparing pupils for them. So long as pupils enter our high schools without knowing a noun from a verb, and when no more than 25 per cent. of them can spell correctly ten words selected from the first reader of the six-year-old child, so long will it be useless for our high schools to browse in the fields of Chaucer and Addison and Bacon and Carlyle. We must get down to first principles, lay foundations, and let the colleges erect the superstructure. English must be taught in all classes at all times, under all circumstances. It is just as important that the teacher of physics, of geometry, of history, be held responsible for the correct expression of his pupils as the chair of English itself.

I do not think that "grammar, rhetoric, and composition" as texts should be studied "throughout every course," but I do think there is need for us all to study English, until we tune our harps on the golden shores and speak with other tongues.

The natural and physical sciences are claiming, and of right ought to claim, a larger and larger place in every curriculum of study, primary, secondary, higher. The history of education for the last twenty-five years could not be written without a very long chapter on the irrepressible conflict between the classicists and the scientists, for which there has been no good educational excuse, and which has resulted in many specific technological institutions, which ought to have been departments of our great universities. The sciences have fought their way to recognition inch by inch, on all sides opposed, traduced, abused, as mere informational, fact-dispensing, bread-winning subjects; and yet in every pitched battle they have won, because nature and its God were on their side; not on the side of the largest battalions, but of eternal truth; for the greatest study of mankind is nature—God's architecture.

And yet there are many that are not particularly benefited by the study of science. It has no special attractions for them and, therefore, imparts to them no real growth. Such ought to graze in other pastures.

This brings me to the real essence of what I wish to say and to the central thought of this brief paper. All secondary courses of study, all requirements for admission to college, and all courses in college should be eminently elastic, and abound in such substitutions that every pupil may find those studies whose proper pursuit will guarantee to him that intellectual grasp and growth which the Infinite Architect of his latent mental aptitudes intended him to secure.

Contend as you may, argue as you will, this is to be the keynote of the educational progress of the next quarter of a century. It may be a period of empiricism rather than of rationalism, but the people have decreed that this is the music the secondary schools are to march by, and the colleges will covet concord.

President Eliot of Harvard, who has perhaps earned the title of leader of the great educational movement of the last decade, looking toward a larger choice in subjects, and more ample substitutions, says: "We need to have wide options as to subjects, so that pupils of different capacities may not be obstructed in their progress, and secondary schools of different tendencies may retain their freedom. What fundamental principle is clearly involved in this recommendation? It is the recognition that English, the modern languages, history, and the sciences can be made in secondary schools the vehicle of just as substantial a training for the human mind as Latin, Greek, and mathematics. When we

have recognized the equal value of these subjects, new and old, and have learned how to teach them with equal efficiency, we shall find that there are too many subjects for any one youth of eighteen to compass. We must, therefore, have options, and wide options, in admission requirements."

President Schurman of Cornell, in defending the departure of that institution from the traditional moorings, by the abolishment of all degrees save that of A.B., says, in reply to the anticipated criticism that this action destroys the conception of liberal culture: "Far from destroying the conception, it enlarges and revivifies it, and brings it into living relation with all the intellectual and æsthetic elements of our modern complex civilization." Again he says: "The two principles which influenced Cornell to take this action were, first, the adaptation of studies to the *needs* of students, and, secondly, the recognition of the natural sciences, and of modern languages and literature, and other liberal arts, on equal terms with the ancient classical languages, as fitted to yield discipline, culture, and education to the minds of students."

Germany, the very Nestor of the ancient classics, is passing through an educational awakening which is destined to result in radical changes in her gymnasias, by which modern subjects will be advanced to a position beside the ancient.

The whole educational world is astir on this subject of educational values, and the consequent claims of wider options that all pupils "May run and not be weary, may walk and not faint."

This stone of eclecticism in courses of study, hitherto rejected, seems destined to become the head of the corner; and wisdom, not policy, right, not expediency, necessity, not sentiment, bid us to accept the logic of the situation. It is part of the evolution of education, manifesting itself in the successful establishment, the rapid multiplication, and the remarkable popularity of the public high schools, which, keeping close to the people, and providing means for the development of the individual, are destined to become the people's colleges to the extent of furnishing opportunities for the universities to do their legitimate work of providing enlarged facilities for individual research and investigation.

If Latin and Greek are to retain their share of rightfully constituted authority in courses of study and remain invaluable aids in the development of English thought and expression, it will not be accomplished through contention and in accordance with the theory that "To the victors belong the spoils," but rather as the result of a spirit of good fellowship, manifesting itself in the universal recognition of the divine right of choice, between and among those studies which unfold the laws of nature, and tell the story of man, all of which, rightly pursued, under right conditions, will eminently insure the development of the human intellect and the inculcation of a deeper reverence for the Creator of all natural phenomena and all human intelligence.

DISCUSSION.

[REPORTED BY JAMES E. RUSSELL.]

PRESIDENT J. G. SCHURMAN of Cornell University.—College-entrance requirements of thirty years ago belong to a remote past. The exclusive study of Latin, Greek, and mathematics belongs to a period when science, history, and modern languages were unknown, and when Latin was the universal means of communication in the learned world. In the last fifty years there has been a great change; new subjects of study now demand our attention. Shall we cling to the old and ignore the new? Shall we devote ourselves to the new to the exclusion of the old? Shall we grant a fair field to all and

no favor to any? Cornell University was founded with a view to giving all subjects an equal chance. Just twenty-nine years ago it recognized the educational value of the modern subjects as equivalent to the old, and ever since it has been advancing in that line. Still, at that time, the B.A. degree was conferred as a recognition of classical scholarship. Accordingly the new subjects were adjusted and arranged in new courses parallel with the classical course, and leading to degrees which were coined to give them recognition, namely, Ph.B., B.L., and B.S. One thing to be remarked with regard to these modern courses is that in every instance the entrance requirements were lower than to the classical course. During these twenty-nine years two tendencies have been in operation, recently culminating in important legislation by the Cornell faculty. (1) For years the elective principle has been growingly adopted, until the larger part of all the courses has become elective. (2) Within the last few years the entrance requirements to the Ph.B., B.S., and B.L. courses have been raised to the level of those to the B.A. course—not that the prescribed subjects were the same, but that, whatever the subjects, the amount of time required by the student for their preparation should be as great in one case as in the other. As the result of these two changes, Cornell University consolidated the four courses leading to one degree—B.A. For admission to this course there are three different avenues. After a student has entered, his work is entirely elective. The three gates are (apart from certain elementary subjects) Greek and Latin, Latin and a modern language, French, German, and higher mathematics. Consequently Cornell University will hereafter be granting the B.A. degree to students who may be ignorant of both Greek and Latin. In practice the great majority will continue to offer Latin; still, if a student offers French and German of equal amount to the Greek and Latin, he will be admitted and may graduate without any knowledge whatever of the ancient languages. This change leads to two or three results of the greatest importance. In the first place, the university gives equal recognition to all the great branches of human knowledge, favoring none and discriminating against none. (2) It has a tendency to favor the classical students, inasmuch as no cheap degrees and easy courses will hereafter compete with the classical course. (3) At present the university enters into close correlation with the high schools. At present only about 5 per cent. of the students in the high schools study Greek—shall the others be excluded from the colleges for that reason? Cornell University's answer is obvious. Indeed, a boy or girl who has completed a good course in the high school, by which is meant a course, not of shreds and patches, but of a small number of staple subjects, systematically and continuously pursued, will on graduation find the doors of Cornell academic department open to him or her.

PROFESSOR EDMUND J. JAMES, The University of Chicago.—Secondary schools may be divided into three classes: (1) Those which are organized solely for the purpose of preparing students for college; (2) those formed to give a general, liberal, disciplinary training during the period which follows the completion of the primary or elementary course of training, and intended to supply the needs of the general public, the great masses of the people, for higher education; (3) those formed to give special, technical training for practical callings, such as commercial high schools, trade high schools, technical high schools, etc. I should say that the relation of the first class of schools to the college should be exactly what the college is pleased to make it. I see no reason for us to attempt, even in the sphere of higher, secondary, or lower education, to construct a single, cast-iron curriculum, to be applied equally to all persons who have attained a certain age and obtained a certain elementary training. The second class ought to have very intimate relations with the college, but in such a way that, on the whole, the college shall adapt itself to its needs and requirements, rather than the secondary school to the needs and requirements of the college; that, however, largely for the reason that care-

ful investigation will, in my opinion, show that there is in essence no great difference between the true interests of these two classes of institutions, properly understood. The third class, that of a technical, special, commercial, trade high school, will stand in no immediate relation to the college, except so far as the curriculum, or course of study, even in these special schools, shall afford the liberal, general, disciplinary training which the college requires for its work. That is to say, I leave here the question entirely undiscussed and untouched as to whether such special courses may not also offer such a general or liberal training as will be sufficient to answer the purpose of the college. I leave this to one side, for, while I believe it is destined to become of importance in course of time, it has at present no immediate practical urgency. I shall confine my attention, therefore, in the few remarks that I shall make, to the high schools of the second class—those which aim to provide a liberal, disciplinary training in continuation of the elementary training of the youth, which may be considered to have come to a close, if anything can ever be considered to have come to a close, by the end of the thirteenth or fourteenth year. I believe, on the whole, that the curriculum in this kind of school should be adapted to the needs and wants of the great majority of its pupils. The great majority of its pupils do not intend to go to college, and if the high school shall have that growth which it ought to have in our society, this will be true for an indefinite period to come, and perhaps forever. There will be found to be no conflict of interests, however, between those classes not intending to go to college and those intending to go, since the course best adapted for the former, or at least fairly adapted for the former, must also be fairly adapted for the latter. Nothing shall be admitted into this curriculum which has not a definite educational value, with reference to the purposes for which this school was organized. Such being the case, the colleges ought to accept the results which this institution is able to attain as the basis upon which it shall continue its work. That is to say, it shall recognize in its system of admissions and promotions, in a distinct and positive way, every individual unit which the high school thus organized and thus controlled shall adopt. In general, therefore, my answer to the question is that the college shall adapt itself to the secondary school, and not the latter to the former. In working out the best secondary curriculum, or a good secondary curriculum (for I doubt very much whether there is any such thing as the best secondary curriculum), the advice and sympathy of college men, the utilization of their expert knowledge, are of great and fundamental importance; but the curriculum shall be constructed from the standpoint of a secondary school in this large sense, and not from the standpoint of the college. As the high school offers at present, and probably will continue to offer in the future, the only opportunity for the masses of the people to obtain a higher education on practicable terms, certain subjects and departments of science, or perhaps one might say, all subjects and all departments of science, must have a representation in this institution. Certainly, besides literature, grammar, and mathematics, natural science and social science should be represented in a very positive way. One of the practical results of the acceptance of these propositions will be that the college may have to offer elementary instruction in certain subjects which it may consider fundamental for the conferring of a degree. Thus, if our American college of today desires to insist upon Latin as a condition of obtaining a degree, it must either cut off a large part of the students now in our high schools, and, as I believe, in the typical high school of the future, or else it must offer elementary instruction in Latin after admission to college, covering the ground of the minimum requirement for graduation. The outcome of this development will be that a youth who has spent four years in any of the curricula accepted by this high school will be admitted to college. That is to say, any youth who has spent four years upon any particular combination of subjects, accepted by this school for graduation, will be able to offer a combination which the college ought to accept for admission, and, so far as it may surpass the reasonable requirements of admission, for promotion.

PRESIDENT CAPEN, Tufts College.—It is only within a few years that the colleges have shown a disposition to recognize what is going on in secondary education. The New England Association of Schools and Colleges is the pioneer, and that was organized only eleven years ago. Since that time much has been accomplished. The New England colleges have been forced to reckon with forces outside their own walls. As for Tufts College, it has taken its stand firmly on the ground of the equivalence of studies, and proposes to grant the degree of A.B. for all college courses. General Walker saw the problem years ago, and worked steadily in his institution to remedy the defects incident to the prevailing methods of higher education. For years he has urged the admission of liberal studies into the curriculum of the School of Technology for the sake of those students who have been forced by circumstances into technical lines. We may as well admit the fact that for many years our colleges have been impeding the progress of educational reform.

PRINCIPAL JOHN T. BUCHANAN, Kansas City High School.—There is an imperative need for more and better teaching of English in all our schools. English cannot be learned through the medium of a foreign language. Vocabulary is necessary, and that comes only from wide reading and much practice. More depends upon the teachers and the method of presentation than upon the subjects. Herein must be found the true equivalence of studies.

PRESIDENT JOSEPH H. SWAIN, Indiana State University.—Indiana University has granted the degree of A.B. for all academic courses during the past ten years. Moreover, the university has found it necessary to take for college entrance what the higher schools are prepared to give. Four years of honest work is all that can be expected. It has never been demonstrated that one subject gives the training that cannot be had through others. Future progress must be evolutionary.

SUPERINTENDENT W. H. MAXWELL, Brooklyn, N. Y.—I am surprised at the apparent unanimity of opinion. Three years ago, when the chairman of this meeting and I attempted to present these views at Richmond, Va., we were greeted by laughter, not by applause. But the question is not yet settled. One problem is how to meet the requirements of most eastern colleges in three foreign languages. We must have four years of English, but that is impossible if three foreign languages are to be taught. Sixty-seven per cent. of our secondary pupils are in public high schools, and not over 10 per cent. of these — less rather than more — intend to go to college. It is absolutely necessary that all these, whether going to college or not, do the same work in the studies that they enter at all. Some adjustment must be made whereby the course of study that is necessary for the majority may be accepted for college entrance.

SUPERINTENDENT CHARLES E. SHELTON, Burlington, Ia.—I will go one step farther. The small high school that can give instruction in but one foreign language should not find its efforts in vain in preparing pupils for college. The colleges should accept equivalents for certain entrance requirements, even though they insist on having the entrance deficiencies made good during the college course.

PROFESSOR JAMES E. RUSSELL, University of Colorado.—It would be a serious mistake if we should accept the theory that the colleges must take whatever the schools choose to give. There can be no close connection between the two unless the schools give something good. A four-years' course consisting of studies continuously and systematically pursued is the least that should be accepted for college entrance. It would be a step backwards to let the weakest and poorest secondary schools determine the standards of secondary education.

SUPERINTENDENT ED. BOYLE, Michigan City, Ind.—I wish to enter a protest against the trend of opinion as expressed in this meeting. The truth is that all these men who so vigorously champion the new studies have themselves gained their power from a study of the old subjects—the classical languages. There is no knowing the English language without Latin; there can be no familiarity with modern history and political economy and economics without a knowledge of the history of Greece and Rome. Banish the classics, and you put aside forever the only means of understanding the modern world.

The discussion closed with a short speech by President Schurman in reply to several questions that had been addressed to him during the progress of the meeting. He contended that the colleges should not come down to the level of the lowest high schools but should adjust their entrance requirements to the curricula of the best schools.

NATIONAL COUNCIL OF EDUCATION.

CONSTITUTION.

PREAMBLE.

The National Council of Education shall have for its object the consideration and discussion of educational questions of general interest and public importance, and the presentation, through printed reports, of the substance of the discussions, and the conclusions formulated. It shall be its object to reach and disseminate correct thinking on educational questions; and, for this purpose, it shall be the aim of the Council, in conducting its discussions, to define and state with accuracy the different views and theories on the subject under consideration, and, secondly, to discover and represent fairly the grounds and reasons for each theory or view, so far as to show, as completely as possible, the genesis of opinion on the subject. It shall be the duty of the Council, in pursuance of this object, to encourage from all its members the most careful statement of differences in opinion, together with the completest statement of grounds for the same. It shall further require from the chairmen of its committees the careful preservation and presentation of the individual differences of opinion, whenever grounds have been furnished for the same by members of their committees. It shall invite the freest discussion of the reports of its committees, and, whenever such reports are not so amended as to embody the new suggestions developed by such discussion, any member making such suggestion or objection may put in writing his view and the grounds therefor, and furnish the same to the Secretary for the records of the Council. It shall prepare, through its President, with the aid of the chairmen of the several committees, an annual report to the National Association, setting forth the questions considered by the Council during the previous year, and placing before the association, in succinct form, the work accomplished. It shall embody in this report a survey of those educational topics which seem to call for any action on the part of the association. The Council shall appoint, out of its own number, committees representing the several departments of education, and thereby facilitate the exchange of opinion among its members on such special topics as demand the attention of the profession or of the public.

ARTICLE I.—MEMBERSHIP.

1. The National Council of Education shall consist of sixty members, selected out of the membership of the National Educational Association. Any member of the association identified with educational work is eligible to membership in the Council, and after the first election such membership shall continue for six years, except as hereinafter provided.

2. In the year 1885 the Board of Directors shall elect eight members—four members for six years, two for four years, and two for two years; and the Council shall elect eight members—five members for six years, two for four years, and one for two years; and annually thereafter the Board of Directors shall elect five members and the Council five members, each member, with the exception hereinafter provided for (Section 5), to serve six years, or until his successor is elected.

3. The annual election of members of the Council shall be held in connection with the annual meetings of the association. If the Board of Directors shall fail, for any reason, to fill its quota of members annually, the vacancy or vacancies shall be filled by the Council.

4. The term of service of the several members of the Council, chosen at the first election, shall be arranged by the Executive Committee of the Council.

5. The absence of a member from two consecutive annual meetings of the Council shall be considered equivalent to resignation of membership, and the Council shall fill vacancies caused by absence from the Council as herein defined, as well as vacancies caused by death or resignation, for the unexpired term. All persons who have belonged to the Council shall, on the expiration of their membership, become honorary members, with the privilege of attending its regular sessions, and participating in its discussions. No state shall be represented in the Council by more than eight members.

ARTICLE II.—FEES.

There shall be no fee for membership in the Council of Education, but each member of it shall secure a membership in the National Educational Association by becoming a life member of the same, or by paying to the Treasurer of the association the annual membership fee of two dollars.

ARTICLE III.—MEETINGS.

There shall be a regular annual meeting of the Council held at the same place as the meeting of the National Association, and at least two days previous to this meeting. There may be special meetings of the Council, subject to the call of the Executive Committee, but the attendance at these meetings shall be entirely voluntary. The regular meeting of the committees shall take place on the days provided for the annual meeting of the Council. Meetings of committees may be called at any time by the chairmen of the respective committees, but attendance at such special meetings shall be entirely voluntary. A majority of the Council shall constitute a quorum for the transaction of business at any meeting, whether regular or called; but any less number, exceeding eight members, may constitute a quorum for the transaction of business at the regular annual meeting, as defined in this article.

ARTICLE IV.—COMMITTEES.

The general management of the affairs of the Council shall be vested in an Executive Committee, composed of the President, Vice-President, and Secretary of the Council, and four other members, all of whom are to be elected by the Council at its annual meeting. There shall be twelve standing committees, each consisting of five members. They shall be appointed by the Executive Committee, and be named as follows:

1. Committee on State-School Systems.
2. Committee on City-School Systems.
3. Committee on Higher Education.
4. Committee on Secondary Education.
5. Committee on Elementary Education.
6. Committee on Normal Education.
7. Committee on Technological Education.
8. Committee on Pedagogics.
9. Committee on Moral Education.
10. Committee on School Sanitation, Hygiene, and Physical Training.
11. Committee on Psychological Inquiry.
12. Committee on Educational Reports and Statistics.

ARTICLE V.—DUTIES OF STANDING COMMITTEES.

The committees of the Council shall consider the topics assigned to them, and report on the same; they may select for their deliberations such other questions belonging to their departments as they deem proper to discuss.

Whenever called upon, the committees shall continue the deliberate work of the association on topics assigned to them, or prepare questions to be submitted to that body.

It shall be the duty of the standing committees to observe the new educational experiments and original investigations within the scope of their assigned topics, and report the same from time to time to the President of the Council.

ARTICLE VI.—DUTIES OF MEMBERS OF THE COMMITTEES.

The members of the Council shall render active service and assistance in the work of the committee to which they have been assigned, and further the general work of the Council as much as is in their power. They shall give their attention to the questions submitted to them, and communicate their conclusions in writing to the chairman of the committee.

Meeting of Committees for Special Work.—A half day at each annual session shall be set apart for "round table" discussions, and each standing committee may conduct its own meeting separately, inviting, at its pleasure, experts, original investigators, or other persons, to present their experience or theoretical views before it, for discussion.

ARTICLE VII.—DUTIES OF THE CHAIRMEN OF COMMITTEES.

The chairman of each committee shall communicate the questions which are to be discussed to each of the members of his committee, and send them such other communications as may assist them in their work. He shall arrange a suitable plan for an exchange of opinion, and embody the conclusions arrived at in a brief report. He shall, from time to time, inform the Secretary of the Council of the progress made by his committee. He shall, with the consent of the other members of his committee, arrange special meetings at a convenient time and place. He shall see that the communications, sent in turn to each member of his committee, are promptly forwarded. He shall state distinctly (in the form of questions, when feasible) the topics on which he desires to have a brief expression of opinion from the members of his committee, and embody the substance of their answers in his report.

ARTICLE VIII.—THE WORK OF THE COMMITTEES.

The work of the committees of the Council shall be carried on in the regular meetings provided for above, and in such special meetings as can be arranged from time to time, according to the pleasure of the committee, and principally in writing, by an exchange of briefly expressed opinions. It shall be the duty of each chairman to devise a plan for the latter. Each member may be required to report on a part of the subject; or the whole topic may be submitted to each member, together with the opinion of the other members that have considered the subject before.

ARTICLE IX.—DUTIES OF THE COUNCIL.

It shall be the duty of the Council to further the objects of the National Association, and to use its best efforts to promote the cause of education in general.

The Council shall assign work to each committee, and receive a report on the same; it shall cause to be published such reports of committees, or parts of the same, as in its

judgment should be brought to general notice; it shall present, through the President of the Council, an annual report of its work to the National Educational Association.

Arrangement of Annual Programme.—The President, in making up the annual programme of exercises, may select any of the twelve standing committees which will, in his opinion, prepare work for the Council of the most timely and vital character, and he shall not be limited in his choice by considerations of routine.

The committee thus reporting may introduce before the Council such specialists, experts, original investigators, or inventors of new methods, as they may deem essential to present effectively their subject-matter before the Council for discussion.

ARTICLE X.—AMENDMENTS.

This constitution may be altered or amended, at a regular meeting of the Council, by a two-thirds vote of the members present, and any provision may be waived at any regular meeting by unanimous consent.

By-laws not in violation of this constitution may be adopted by a two-thirds vote of the Council.

OFFICERS, MEMBERS, STANDING COMMITTEES.

OFFICERS FOR 1896-97.

B. A. HINSDALE.....	Ann Arbor, Mich	<i>President.</i>
CHARLES DE GARMO.....	Swarthmore, Pa.....	<i>Vice-President.</i>
BETTIE A. DUTTON	Cleveland, O.....	<i>Secretary.</i>

Executive Committee.—The President, Vice-President, Secretary; H. S. Tarbell, Providence, R. I.; J. M. Greenwood, Kansas City, Mo.; W. E. Sheldon, Boston, Mass.; W. F. King, Mt. Vernon, Ia.

OFFICERS FOR 1897-98.

CHARLES DE GARMO....	Swarthmore, Pa.....	<i>President.</i>
WM. F. KING.....	Mt. Vernon, Ia.....	<i>Vice-President.</i>
BETTIE A. DUTTON.....	Cleveland, O.....	<i>Secretary.</i>

Executive Committee.—The President, Vice-President, Secretary; B. A. Hinsdale, Ann Arbor, Mich.; J. H. Phillips, Birmingham, Ala.; C. H. Keyes, Berkeley, Cal.; Walter L. Hervey, New York, N. Y.

MEMBERS.

NOTE: The letter "A" following a name denotes that the member is of the class elected by the association; the letter "C," by the Council.

<i>Term Expires.</i>		<i>Term Expires</i>	
*Richard G. Boone, Ypsilanti, Mich.....	A 1898	*James M. Green, Trenton, N. J.....	A 1901
*F. Louis Soldan, St. Louis, Mo.....	A 1898	*Augustus S. Downing, Albany, N. Y.....	A 1901
Walter L. Hervey, New York, N. Y.....	A 1898	*A. R. Taylor, Emporia, Kan.....	A 1901
*Joseph Baldwin, Huntsville, Tex.....	A 1898	*Ellen C. Sabin, Milwaukee, Wis.....	A 1901
*James H. Canfield, Columbus, O.....	A 1898	*J. R. Preston, Jackson, Miss.....	A 1901
A. S. Draper, Champaign, Ill.....	C 1898	*Geo. P. Brown, Bloomington, Ill.....	C 1901
William H. Maxwell, Brooklyn, N. Y.....	C 1898	*Bettie A. Dutton, Cleveland, O.....	C 1901
*James H. Van Sickle, Denver, Colo.....	C 1898	*Chas. H. Keyes, Pasadena, Cal.....	C 1901
*B. A. Hinsdale, Ann Arbor, Mich.....	C 1898	Wm. L. Bryan, Bloomington, Ind.....	C 1901
*N. C. Dougherty, Peoria, Ill.....	C 1898	*Wm. F. King, Mt. Vernon, Ia.....	C 1901
*W. H. Bartholomew, Louisville, Ky.....	A 1899	*Edwin C. Hewett, Normal, Ill.....	A 1902
*Frank A. Fitzpatrick, Boston, Mass.....	A 1899	*Albert G. Lane, Chicago, Ill.....	A 1902
*Henry Sabin, Des Moines, Ia.....	A 1899	Euler B. Smith, Athens, Ga.....	A 1902
*E. Oram Lyte, Millersville, Pa.....	A 1899	*Chas. A. McMurry, Normal, Ill.....	A 1902
*J. M. Greenwood, Kansas City, Mo.....	A 1899	*J. F. Millsap, Salt Lake City, Utah ..	A 1902
Wm. A. Mowry, Salem, Mass.....	C 1899	*Charles M. Jordan, Minneapolis, Minn...	C 1902
*John Dewey, Chicago, Ill.....	C 1899	E. W. Coy, Cincinnati, O.....	C 1902
*Nathan C. Schaeffer, Harrisburg, Pa.....	C 1899	Horace S. Tarbell, Providence, R. I.....	C 1902
*David L. Kiehle, St. Paul, Minn.....	C 1899	*Edward R. Shaw, New York, N. Y.....	C 1902
*Mary E. Nicholson, Indianapolis, Ind.....	C 1899	*John W. Cook, Normal, Ill.....	C 1902
*C. C. Rounds, New York, N. Y.....	A 1900	*W. T. Harris, Washington, D. C.....	A 1903
*J. H. Phillips, Birmingham, Ala.....	A 1900	*C. B. Gilbert, Newark, N. J.....	A 1903
*E. E. White, Columbus, O.....	A 1900	William R. Harper, Chicago, Ill.....	A 1903
*James H. Baker, Boulder, Colo.....	A 1900	Earl Barnes, Stanford University, Cal....	A 1903
Oscar H. Cooper, Galveston, Tex.....	A 1900	*Charles R. Skinner, Albany, N. Y.....	A 1903
*Aaron Gove, Denver, Colo.....	C 1900	*Charles De Garmo, Swarthmore, Pa.....	C 1903
*Wm. E. Sheldon, Boston, Mass.....	C 1900	El H. Jones, Cleveland, O.....	C 1903
*Irwin Shepard, Winona, Minn.....	C 1900	Elmer E. Brown, Berkeley, Cal.....	C 1903
*Lucia Stickney, Cincinnati, O.....	C 1900	*S. C. Williams, Ithaca, N. Y.....	C 1903
*H. H. Seerley, Cedar Falls, Ia.....	C 1900	*Nicholas Murray Butler, New York, N. Y.	C 1903

*Present at the meeting of the Council in Milwaukee, 1897.

HONORARY MEMBERS.

- Henry Barnard, Hartford, Conn.
 William N. Barringer, Newark, N. J.
 Newton Bateman, Galesburg, Ill.
 D. Bemiss, Spokane, Wash.
 Thomas W. Bicknell, Providence, R. I.
 *Albert C. Boyden, Bridgewater, Mass.
 Anna C. Brackett, New York, N. Y.
 John E. Bradley, Jacksonville, Ill.
 Edward Brooks, Philadelphia, Pa.
 John T. Buchanan, New York, N. Y.
 Matthew H. Buckham, Burlington, Vt.
 David M. Camp, New Britain, Conn.
 Aaron L. Chapin, Beloit, Wis.
 Clara Conway, Memphis, Tenn.
 Matilda S. Cooper, Nyack, N. Y.
 *William J. Corthell, Gorham, Me.
 J. L. M. Curry, Richmond, Va.
 V. C. Dibble, Charleston, S. C.
 John W. Dickinson, Boston, Mass.
 Larkin Dunton, Boston, Mass.
 *John Eaton, Washington, D. C.
 Chas. W. Eliot, Cambridge, Mass.
 Geo. T. Fairchild, Manhattan, Kan.
 William W. Folwell, Minneapolis, Minn.
 W. R. Garrett, Nashville, Tenn.
 Daniel C. Gilman, Baltimore, Md.
 James C. Greenough, Westfield, Mass.
 John M. Gregory, Washington, D. C.
 W. N. Hailmann, Washington, D. C.
 G. Stanley Hall, Worcester, Mass.
 J. George Hodgins, Toronto, Canada.
 Ira G. Hoitt, Sacramento, Cal.
 James H. Hoose, Pasadena, Cal.
 George W. Howison, San Francisco, Cal.
 James L. Hughes, Toronto, Canada.
 Thomas Hunter, New York, N. Y.
 Ellen Hyde, Framingham, Mass.
 John S. Irwin, Lafayette, Ind.
 E. J. James, Philadelphia, Pa.
 Henry N. James, Tacoma, Wash.
 H. S. Jones, Lincoln, Neb.
 E. S. Joynes, Knoxville, Tenn.
 Thomas Kirkland, Toronto, Canada.
 Henry M. Leipziger, New York, N. Y.
 James MacAlister, Philadelphia, Pa.
 Albert P. Marble, New York, N. Y.
 Francis A. March, Easton, Pa.
 Lillie J. Martin, San Francisco, Cal.
 Thomas J. Morgan, Washington, D. C.
 Lemuel Moss, Minneapolis, Minn.
 Birdseye G. Northrop, Clinton, Conn.
 John M. Ordway, New Orleans, La.
 Francis W. Parker, Chicago, Ill.
 Warren D. Parker, River Falls, Wis.
 *S. S. Parr, St. Cloud, Minn.
 W. H. Payne, Nashville, Tenn.
 Selim H. Peabody, Chicago, Ill.
 John B. Peaslee, Cincinnati, O.
 *William F. Phelps, St. Paul, Minn.
 Josiah L. Pickard, Iowa City, Ia.
 John T. Prince, Boston, Mass.
 Zalmon Richards, Washington, D. C.
 William H. Ruffner, Lexington, Va.
 J. G. Schurman, Ithaca, N. Y.
 H. E. Shepard, Charleston, S. C.
 Edgar A. Singer, Philadelphia, Pa.
 James A. Smart, Lafayette, Ind.
 Homer B. Sprague, Cal.
 J. W. Stearns, Madison, Wis.
 Thomas B. Stockwell, Providence, R. I.
 Grace Bibb Sudborough, Omaha, Neb.
 John Swett, San Francisco, Cal.
 W. R. Thippen, Savannah, Ga.
 H. S. Thompson, Columbia, S. C.
 L. S. Thompson, New Wilmington, Pa.
 Julia S. Tutwiler, Livingstone, Ala.
 Delia L. Williams, Delaware, O.
 J. Ormond Wilson, Washington, D. C.
 H. K. Wolfe, Lincoln, Neb.
 C. M. Woodward, St. Louis, Mo.

DECEASED MEMBERS.

Robert Allyn,	1894	Merrick Lyon	1888
Israel W. Andrews	1888	James McCosh	1894
Norman A. Calkins	1895	M. A. Newell	1893
N. R. H. Dawson	1895	Edward Olney	1886
Samuel S. Greene	1883	Gustavus J. Orr	1888
Daniel B. Hager	1896	John D. Philbrick	1885
John Hancock	1891	R. W. Stevenson	1893
William D. Henkle	1882	Eli T. Tappan	1888
Elnathan E. Higbee	1889	Charles O. Thompson	1885
George Howland	1892	James P. Wickersham	1891

*Present at the meeting of the Council at Milwaukee, 1897.

STANDING COMMITTEES.

MILWAUKEE MEETING, 1897.

I.—ON STATE-SCHOOL SYSTEMS.

SUB-TOPICS.

- | | |
|--|---|
| 1. <i>Organization</i> (1883). | 8. <i>State, County, City, and District Supervision</i> (1892). |
| 2. <i>Supervision</i> (1885). | 9. <i>The Ungraded School</i> (1895). |
| 3. <i>Licensure of Teachers</i> (1889). | N. C. Schaeffer, Harrisburg, Pa., <i>Chairman</i> . |
| 4. School Revenues. | J. H. Canfield, Columbus, O. |
| 5. <i>Compulsory Education</i> (1891). | J. R. Preston, Jackson, Miss. |
| 6. <i>Tenure of Office of Teachers</i> (1887). | J. G. Schurman, Ithaca, N. Y. |
| 7. Supplying the Schools with Text-Books. | Henry Sabin, Des Moines, Ia. |

II.—ON CITY-SCHOOL SYSTEMS.

SUB-TOPICS.

- | | |
|--|--|
| 1. Organization. | 9. Evening Schools. |
| 2. <i>Supervision</i> (1884, 1890). | 10. Enriching the Course of Study below the High School. |
| 3. Superintendency. | 11. <i>Graded Course of Study on Herbartian Principles</i> (1895). |
| 4. Qualification of Teachers. | Aaron Gove, Denver, Colo., <i>Chairman</i> . |
| 5. <i>Classification of Pupils</i> (1886). | L. H. Jones, Cleveland, O. |
| 6. Ungraded Schools. | Oscar H. Cooper, Galveston, Tex. |
| 7. <i>Business Side of City-School Systems</i> (1888, 1889, 1890, 1896). | N. C. Dougherty, Peoria, Ill. |
| 8. Promotions and Examinations. | Chas. M. Jordan, Minneapolis, Minn. |

III.—ON HIGHER EDUCATION.

SUB-TOPICS.

- | | |
|--|--|
| 1. <i>Higher Institutions Required</i> (1885). | 7. The Seminary Method of Instruction. |
| 2. <i>Harmonising of Higher, Secondary, and Elementary Schools</i> (1882). | 8. <i>Professional and Technical Instruction in the University</i> (1894). |
| 3. <i>Admission to College</i> (1884). | J. E. Bradley, Jacksonville, Ill., <i>Chairman</i> . |
| 4. <i>Elective System</i> (1888). | William F. King, Mount Vernon, Ia. |
| 5. <i>Higher Life of the American College</i> (1896). | James H. Baker, Boulder, Colo. |
| 6. What Should Precede the University? | A. S. Draper, Champaign, Ill. |
| | S. G. Williams, Ithaca, N. Y. |

IV.—ON SECONDARY EDUCATION.

SUB-TOPICS.

- | | |
|---|---|
| 1. <i>High Schools</i> (1882). | 8. Difference between College Methods of Instruction and High-School Methods. |
| 2. <i>Academies</i> (1885). | |
| 3. <i>Preparation for College</i> (1884). | W. H. Bartholomew, Louisville, Ky., <i>Chairman</i> . |
| 4. <i>Relation of High Schools to Colleges</i> (1887). | F. Louis Soldan, St. Louis, Mo. |
| 5. <i>Opportunities of the Rural Population for Secondary Education</i> (1889). | H. H. Seerley, Cedar Falls, Ia. |
| 6. Schools by Correspondence. | Horace S. Tarbell, Providence, R. I. |
| 7. <i>Uniformity in Requirements for Admission to College</i> (1891). | Edward R. Shaw, New York, N. Y. |

V.—ON ELEMENTARY EDUCATION.

SUB-TOPICS.

1. *Course of Study* (1882).
 2. *Oral Teaching* (1884).
 3. *Text-Books* (1886).
 4. *Waste in Elementary Education* (1888).
 5. Kindergarten.
 6. Language Lessons in Elementary Schools.
 7. Science Teaching in Lower Grades.
 8. *Essentials in Elementary Education* (1890).
 9. *The Uses of Literature in Elementary Education* (1892).
 10. *Economy in Elementary Education* (1895).
- Geo. P. Brown, Bloomington, Ill., *Chairman*.
 William E. Sheldon, Boston Mass.
 Zalmon Richards, Washington, D. C.
 J. H. Phillips, Birmingham, Ala.
 Bettie A. Dutton, Cleveland, O.

VI.—ON NORMAL EDUCATION.

SUB-TOPICS.

1. Kind of Normal Schools Required.
 2. *Academical and Professional Training* (1883, 1889).
 3. *Practice Departments* (1885).
 4. *City Normal Schools* (1891).
 5. *Teachers' Institutes* (1887).
 6. *The Relation of the Normal School to Other Institutions of Learning* (1892).
 7. Normal-School Extension.
 8. *The Kind and Amount of Practice Work and Its Place in the Normal-School Course* (1895).
- R. G. Boone, Ypsilanti, Mich., *Chairman*.
 Irwin Shepard, Winona, Minn.
 James M. Green, Trenton, N. J.
 William L. Bryan, Bloomington, Ill.
 John W. Cook, Normal, Ill.

VII.—ON TECHNOLOGICAL EDUCATION.

SUB-TOPICS.

1. *Technical Training in Public Schools* (1881).
 2. Preparation for Institutes of Technology.
 3. *Pedagogical Value of the School Workshop* (1886).
 4. *Agricultural Colleges* (1888).
 5. Summer School of Science.
 6. *Relation of Technological to Liberal Education* (1894).
 7. *The Preparation of Manual Training and Technical Teachers a Function of the Technical College* (1896).
- Euler B. Smith, Athens, Ga., *Chairman*.
 William H. Payne, Nashville, Tenn.
 Charles H. Keyes, Berkeley, Cal.
 Elmer E. Brown, Berkeley, Cal.
 J. H. Van Sickle, Denver, Colo.

VIII.—ON PEDAGOGICS.

SUB-TOPICS.

1. *Chair of Pedagogy in Colleges* (1882).
 2. *Pedagogy as a Science* (1884).
 3. Pedagogical Inquiry.
 4. *Function of Public Schools* (1886, 1887).
 5. *Educational Value of Manual Training* (1889).
 6. Moral Education.
 7. Pedagogical Terminology.
 8. *The Education of the Will* (1891).
 9. Distinguishing Ideas in the Herbartian System of Pedagogy.
 10. *Scope and Character of the Pedagogical Work in Universities* (1892).
 11. *The Laws of Mental Congruence and Energy Applied to Some Pedagogical Problems* (1895).
- Nicholas Murray Butler, New York, N. Y., *Chairman*.
 David L. Kiehle, Minneapolis, Minn.
 A. R. Taylor, Emporia, Kan.
 Charles A. McMurry, Normal, Ill.
 B. A. Hinsdale, Ann Arbor, Mich.

IX.—ON MORAL EDUCATION.

[Changed from "*On the Education of Girls*," 1891.]

SUB-TOPICS.

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|--|---|
| 1. <i>Co-education</i> (1883, 1890). | 7. <i>Moral Instruction in the Elementary Schools</i> (1896). |
| 2. <i>Technical Training for Girls</i> (1886). | Charles De Garmo, Swarthmore, Pa., <i>Chairman</i> . |
| 3. <i>What Education is Best</i> (1888). | Lucia Stickney, Cincinnati, O. |
| 4. <i>The Education of Girls</i> (1891). | Charles C. Rounds, New York, N. Y. |
| 5. <i>Practical Culture of the Moral Virtues</i> (1892). | J. F. Millspaugh, Salt Lake City, Utah. |
| 6. Direct and Indirect Moral Teaching. | Walter L. Hervey, New York, N. Y. |

X.—ON SCHOOL SANITATION, HYGIENE, AND PHYSICAL TRAINING.

[Changed from "*On Hygiene in Education*," 1891.]

SUB-TOPICS.

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|---|---|
| 1. <i>Sanitary Exercises and Appliances in Public Schools</i> (1883). | 6. <i>Schoolroom Hygiene</i> (1896). |
| 2. <i>Recesses</i> (1884, 1885). | William A. Mowry, Hyde Park, Mass., <i>Chairman</i> . |
| 3. <i>Relation of Mental Labor to Physical Health</i> (1887). | Mary E. Nicholson, Indianapolis, Ind. |
| 4. <i>Harmonious Development</i> (1889). | Joseph Baldwin, Austin, Tex. |
| 5. <i>Physical Education</i> (1891). | F. A. Fitzpatrick, Boston, Mass. |
| | C. B. Gilbert, Newark, N. J. |

XI.—ON PSYCHOLOGICAL INQUIRY.

[Changed from "*On Educational Literature*," 1891.]

SUB-TOPICS.

- | | |
|---|--|
| 1. <i>School Reports</i> (1885). | 7. <i>How the Will Combines with Intellect in the Higher Orders of Knowing</i> (1896). |
| 2. <i>Books on Pedagogy</i> (1888). | E. O. Lyte, Millersville, Pa., <i>Chairman</i> . |
| 3. <i>Use of General Libraries</i> (1887). | William T. Harris, Washington, D. C. |
| 4. <i>Educational Literature</i> (1890). | Edwin C. Hewett, Normal, Ill. |
| 5. <i>Relation of Mnemonic Systems to the Cultivation of the Power of Thought</i> (1892). | Earl Barnes, Stanford University, Cal. |
| 6. <i>The Psychology of the Imitative Functions in Childhood</i> (1894). | John Dewey, Chicago, Ill. |

XII.—ON EDUCATIONAL REPORTS AND STATISTICS.

[Changed from "*On Educational Statistics*," 1891.]

SUB-TOPICS.

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|---|------------------------------------|
| 1. <i>Reform in Statistics</i> (1885, 1887). | J. M. Greenwood, Kansas City, Mo. |
| 2. <i>What Statistics Should be Collected</i> (1889, 1891). | E. W. Coy, Cincinnati, O. |
| William H. Maxwell, Brooklyn, N. Y., <i>Chairman</i> . | Augustus S. Downing, Albany, N. Y. |
| | A. G. Lane, Chicago, Ill. |

NOTE: In view of proposed radical changes in the organization of the Council, the usual committee reports will not be made at the meeting in 1898. A special programme will be prepared and duly announced by the President and Executive Committee.

SECRETARY'S MINUTES

FIRST DAY.

OPENING SESSION.—JULY 5, 1897.

The Council assembled in Temple Emanu-El and was called to order at 9:30 A. M. by the President, B. A. Hinsdale.

Thirty-eight members were present.

Prayer was offered by Nathan C. Schaeffer.

President Hinsdale welcomed the members present, explained the absence of others, and referred particularly to that of W. E. Sheldon, who was absent on account of the recent death of a daughter.

On motion, President Hinsdale was requested to express to Mr. Sheldon the sympathy of the Council.

W. H. Bartholomew, Chairman of the Committee on Secondary Education, presented a report on "The High School and Its Functions." The report was discussed, and was referred back to the committee.

AFTERNOON SESSION.

The Council opened its session at 2:30 P. M.

Committees were appointed by the President as follows:

On Memberships—Henry Sabin, L. H. Jones, Miss Mary E. Nicholson.

On Nominations—D. L. Kiehle, W. H. Bartholomew, H. S. Tarbell.

The subject for the afternoon, "The Æsthetic Element in Education," was presented by John Dewey, W. T. Harris, and Miss Mary E. Nicholson.

On motion of Mr. Greenwood, the Council directed that the papers in discussion be printed with the reports.

The Council adjourned at 4:30 P. M.

EVENING SESSION.

The Council met at 8 P. M.

On motion of S. G. Williams, the Council of Education went into executive session. Forty-five members were present.

Mr. Soldan, Chairman of the committee appointed at Buffalo to report on the question of "The Education of the Negroes and Indians," requested further time. Granted.

Mr. Sabin presented the report of the Committee of Twelve on Rural Schools, and moved that the Council receive this report, and that the committee be discharged. Carried. Many suggestions were made as to the most effective means for giving the report large circulation. Messrs. Henry Sabin, W. T. Harris, and B. A. Hinsdale were appointed to present the matter to the Board of Directors of the general association.

Questions relative to future work of the Council were presented in a paper by Geo. P. Brown, and, after discussion, a committee of five was suggested to act with the President relative to the work for the next year.

SECOND DAY.

MORNING SESSION.—JULY 6, 1897.

The Council assembled at 9:30 A. M.

Prayer offered by William F. King.

The subject for the morning, "University Ideals," was presented by Professor A. T. Ormond, of Princeton University; James H. Baker, of the University of Colorado, and Joseph Swain, of Indiana University. W. T. Harris, by request, followed in discussion of the general topic.

D. L. Kiehle expressed, on behalf of the Council, thanks to Professor Ormond, and, after the calling of the roll by the Secretary, the Council adjourned to 2:30 P. M.

AFTERNOON SESSION.

The subject of "Election in General Education" was presented in a paper by E. E. White. Mr. White's paper was received, and, with discussions of the same, ordered printed.

At 4:30 P. M. the Council went into executive session.

The following report of the Special Committee on the Organization of a Committee on School Hygiene was submitted by E. Oram Lyte, of the committee:

It is evident that the most important interests of the public schools and of the nation are bound up with the health of school children and school-teachers. The assembling of large numbers of children for several hours a day in the same building involves special perils to health, even when all conditions are as favorable as possible. In very few schools are the best possible hygienic conditions attained. In a vast number of schools the hygienic conditions are, without doubt, deplorably bad. There are not wanting scientists of repute who hold, upon the ground of more or less adequate investigations (mostly European), that the modern public school seriously threatens the vitality of the people. Some, who pretend to speak with scientific authority, charge the public school with almost all the disease and death among school children and school-teachers; and quacks of various sorts join in the hue in hope of furthering their private interests.

In presence of this situation—in presence of indictments which, if wholly true, would put the public school on trial for its life, and which, even if wholly false, tend to impair its good name and efficiency—in presence of this situation, what action is demanded from the only organized body which represents all the educational interests of America?

Your committee believes that two things should be done.

I. *There should be investigation.*

As members of the Council know, by far the greater number of researches in school hygiene have been made in Europe. Many of the results obtained there are equally applicable in America; others are not. In addition to all researches already made at home or abroad, we need to have made, at least in a few typical communities, a thorough scientific survey of all conditions affecting the health of the school. This survey should be made, as far as it goes, at least as thorough, from a scientific point of view, as that which under government patronage is applied to the hygiene of cattle. Work of this sort is expensive in time and money, and requires, as *sine qua non*, the devoted service of the best scientists. But in what other way can we hope to know how our public school is actually affecting public health, how to meet actual evils with intelligent remedies, or even how to hold public confidence against attacks, which, truly or falsely, claim scientific warrant? No reason that will appeal to the common sense of men can be given for delaying such investigation, except lack of money. If the National Educational Association is too poor to make a beginning of such investigation, how can individual scientists, with their usually slender resources, be expected to make a beginning for us?

II. *There should be propaganda.*

Your committee would by no means undervalue what has already been done in the field of school hygiene. On the contrary, it believes that one of the most important duties of this association is to gather up the large and valuable outlay of results in this field and bring them to bear more directly and effectively than at present upon actual school conditions. To this end we suggest:

1. There should be prepared a compendious statement of what is already known in the field of school hygiene. This compendium should cover (a) all phases of the physical environment of the school (school grounds, drainage, schoolhouse construction, heating, lighting, ventilation, seating, type of text-books, etc.); and (b) all phases of school occupation (length of recitation period in different grades, length, frequency, and character of rests, physical exercises, play, requirements in writing, drawing, manual training, home-study requirements, treatment of children during period of second dentition and of early adolescence, etc.).

On all these points there should be (a) statements of those conclusions in respect to which competent authorities are generally agreed; and (b) statements of opposing views where such exist. The need of setting

before the educational public those hygienic requirements which no school has any longer a moral right to ignore, in distinction from the assertions of individual investigators who may be contradicted by other investigators, is great and immediate. The school superintendent cannot be a specialist in everything. If not a specialist in hygiene, it is practically impossible for him, in many cases of fundamental importance, to distinguish, amid the conflicting voices of scientists, the voice of science. Let us meet his need. Let us, through a committee of scientists and school men, give the superintendent a manual which will, on the one hand, tell him what ought to be done, and which will, on the other hand, stand between him and those who unwarrantably assume to speak for science.

2. There should be a well-considered report upon education in school hygiene. This report should show (a) what is now doing in this field in our universities, normal schools, or elsewhere; and (b) what ought to be done in them. It is alleged by those high in authority that our universities, technical and medical schools, for the most part, fail to provide adequately for the training of experts in hygiene; and that our normal schools have not yet given school hygiene its due place and proportion of time in the professional training of teachers.

The facts upon this subject should be made known. The report should advise us what enlargement of facilities for training in hygiene the present situation demands of our great universities; and what kind and amount of training in hygiene should be undertaken in normal schools, city training schools, and with the present teaching force.

3. There should be a report upon legislation relative to school hygiene, including (a) a summary of existing legislation in Europe and America upon this subject; and (b) a consensus on needed legislation. A single example may serve to illustrate the necessity in this direction. When steamboats and elevators are subject to government inspection in the interest of public safety, no good reason appears why school buildings should not be subject to equally stringent inspection in the interest of public health.

The work outlined were better not undertaken unless it can be made an unquestionable success. For a report of questionable value supported by the authority of this association would prove a source of great mischief for many years. The work requires the highest scientific training coupled with the wisest practical judgment. It is not common sense, but common nonsense, to suppose that school hygiene requires less thorough scientific consideration than that which the government specialists give to the hygiene of wheat. On the other hand, the actual application of scientific principles must also have regard to actual and varying conditions in the schools, and requires the wisdom which comes alone from everyday practical experience.

Your committee accordingly recommends to the Council:

- (1) That there be appointed a general committee on school hygiene.
- (2) That this committee be organized by the appointment of five active members of the National Educational Association, who shall have power to invite the co-operation of experts in the various sciences touching school hygiene.
- (3) That the committee be instructed to report to the Council in 1899.
- (4) That the council request the trustees of the National Educational Association to appropriate two thousand five hundred dollars to pay expenses necessary in connection with the work of the committee.

Respectfully submitted,

WILLIAM L. BRYAN, *Chairman*,
E. ORAM LYTE,
ALBERT P. MARBLE,
WILLIAM A. MOWRY,
EDWARD R. SHAW.

Mr. Kiehle moved that this committee be appointed by the Executive Committee in connection with the President about to be elected. Carried.

The chair named as committee to consider and report on the general work of the Council the following:

F. Louis Soldan,	James H. Baker,
Nicholas Murray Butler,	J. M. Greenwood,
C. B. Gilbert.	

The report of the Committee on Memberships was submitted and adopted:

Your Committee on Memberships of the Council submits the following:

The following vacancies exist:

Terms expiring in 1899: Charles De Garmo, L. H. Jones, Elmer E. Brown, S. G. Williams, Nicholas Murray Butler.

Memberships lapsing according to the constitution by absence from the meeting of the Council for two successive years: Zalmon Richards, W. H. Payne.

We recommend the election of:

Charles De Garmo, to succeed himself; term to expire 1903.

L. H. Jones, to succeed himself; term to expire 1903.
 Elmer E. Brown, to succeed himself; term to expire 1903.
 S. G. Williams, to succeed himself; term to expire 1903.
 Nicholas Murray Butler, to succeed himself; term to expire 1903.
 E. E. White, to succeed Zalmon Richards; term to expire 1900.
 Miss Ellen C. Sabin, to succeed W. H. Payne; term to expire 1901.

Respectfully submitted,
 HENRY SABIN,
Chairman.

The report of the Committee on Nominations was submitted and adopted:

Your Committee on Nominations begs leave to report the following:

For *President*, Charles De Garmo.

For *Vice-President*, William F. King.

For *Secretary*, Miss Bettie A. Dutton.

For *Executive Committee*, B. A. Hinsdale, J. H. Phillips, C. H. Keyes, W. L. Hervey.

Respectfully submitted,
 For the committee,
 D. L. KIEHLE,
Chairman.

The thanks of the Council were expressed by Messrs. Canfield and Rounds to the retiring President, for his able, just, impartial, and courteous manner of conducting the sessions of the Council.

Adjourned.

BETTIE A. DUTTON,
Secretary.

PAPERS AND DISCUSSIONS.

THE ÆSTHETIC ELEMENT IN EDUCATION.

BY JOHN DEWEY, THE UNIVERSITY OF CHICAGO.

I interpret this title to mean a certain phase of all education, rather than a particular group of studies.

I. Responsiveness, an emotional reaction to ideas and acts, is a necessary factor in moral character.

II. It is also a necessary element in intellectual training, as supplying a delicacy and quickness of recognition in the face of practical situation.

III. The significance of the æsthetic element is that it trains a natural sensitiveness and susceptibility of the individual to usefulness in these directions. The individual has a natural tendency to react in an emotional way; but this natural disposition requires training. In some, who are naturally obtuse or thick-skinned, it requires to be brought out; in others, who are naturally more sensitive, it may assume a morbid and exaggerated form, unless made to function in definite ways.

IV. The factors in æsthetic experience which are especially adapted to afford the right training are balance and rhythm. Balance implies control or inhibition which does not sacrifice a fullness and freedom of

the experience. It is opposed both to random, undirected action and to repressed, or undeveloped, action. Rhythm involves regularity and economy in the sequence of actions. Both balance and rhythm are forms of variety in unity: rhythm being temporal, balance spatial.

V. The æsthetic element thus should combine freedom of individual expression and appreciation with the factor of law and regularity in what is expressed. It is possible to extend the idea of artistic production to all kinds of work.

VI. Modern theory and practice in education have laid relatively too much stress upon the volitional training in practical control and intellectual training in the acquisition of information, and too little upon the training of responsiveness. We need to return more to the Greek conception, which defined education as the attaching of pleasure and pain to the right objects and ideals in the right way. This ideal over-emphasized the emotional element, but we have now gone to the opposite extreme.

THE ÆSTHETIC ELEMENT IN EDUCATION.

BY W. T. HARRIS, UNITED STATES COMMISSIONER OF EDUCATION.

In the course of study, as we find it in the schools, there are five distinct lines of intellectual development which have deep significance, both as regards the unfolding of the mind itself and as regards the adjustment of the career of the pupil towards the social institutions in which he is to live.

These five lines of intellect, which the pupil cultivates in school, aid him in perfecting his powers as an individual, and also in solving the problem of life. They have both a psychological side and a sociological side.

Two of these five intellectual disciplines are mathematics and grammar, these relating respectively to the world of nature and to the world of mind as revealed in language. While mathematics gives us the forms in which inorganic matter may exist and be moved, and makes known to us the structure of time and space and all externality, grammar and its kindred studies, pure logic and ethics, give us the form of self-activity and the structure of all that possesses internality.

Here are the two polar directions of intellectual education, relating the pupil to matter and to mind. Psychologically these branches give him the first use of the two deep-lying categories of the intellect, quantity and energy; the category of quantity deals with results in space and time; the category of energy deals with causal originations. If one does not see, at first, how grammar and logic deal with energy and its

laws of self-activity, let him reflect on the fact that logic deals with the ideas of universal, particular, and singular, and grammar shows the devices in speech for their expression; and then, next, let him consider that energy, or self-activity, has just these aspects, being general, if we consider it before it has acted on itself and particular in the process of activity. It is, moreover, singular or one activity, uniting general and particular. He will find this thought the key to logic and grammar.

Out of these two primordial studies, mathematics and philology, arise three other studies, making up the five.

First, there is the study of organic nature, the first transitions from mathematical nature towards mind, or the pole of energy; not only the plant and the animal belong to the organic nature, for they are manifestations of life or energy which is active in organizing matter and movement into bodily expression; but, besides these, we have chemical processes, and geological changes, cycles or circular movements of astronomical bodies, sun, moon, and planets, and the meteorological process, all of these belonging to the crude first stages of the manifestation of energy on matter. For, in short, we have a world that is in the process of making. It is ascending out of the mathematical condition, so to speak, to the organic condition, wherein energy or mind is manifesting itself in a more direct and adequate form. For the plant and animal show us perpetual readjustment of the internal to the external. The internal readjusts itself to the external, but with a purpose, namely, to make the external environment of nature conform to its ideals and become its instrument. It is, therefore, at first an act of adjusting itself to the external, but finally a readjustment of the external to the internal, all brought about by the power of mind or energy. Thus all studies of nature, not only botany and zoölogy, or biology in general, but also physics, both molecular and molar (movements of molecules and masses); in short, chemistry, and the sciences of heat, light, and electricity; also geology, meteorology, astronomy—all relate to the beginnings of the organic process and are a sort of foundation to it.

Hence the two branches that bring the school pupil face to face with nature are mathematics and biology, or the science of organism. In the elementary school, geography covers this line of intellectual training, while arithmetic covers the purely inorganic side of nature.

There are two other lines, namely, the study of history and the study of art and literature, both of these subsidiary to the study of energy or self-activity, as found in grammar, logic, and ethics.

History shows the spectacle of the will power of individual man consolidating into social units of will power—organizing institutions, the state, the church, and civil society, with its division of labor and its union of labor through commerce. In history the little individual

sees his bigger self. In the Middle Ages the philosophers used to speak of the microcosm, or the individual man, and the macrocosm, or the organic whole of individuals. History, in this way of looking at it, enables the microcosm to see the macrocosm.

Even in the most elementary beginnings in the district school or the kindergarten there are scraps of history and biography that initiate the pupil into this great and important field of knowledge, and enable him to see in dim, shadowy outlines what the great world (the macrocosm) is doing; and he is astonished to find that there are not only individual deeds for particular uses, but also deeds done by society as a whole—national deeds, and even cosmic deeds. It takes a long time to grow into the use of this category of the mind, whereby we can see clearly social action and understand its results, critically. The growth of this insight is the development of a moral sense in the pupil. It is something higher than moral *habits*, which he has already acquired in the family, or ought to have acquired, before coming to school. The stage of moral habit was learned through obedience to authority. It listened to the commands, “do this, and refrain from doing that.” But though moral habit is a great thing in the conduct of life, it is not so great as moral insight, which sees the necessity of morals for the very existence of the social whole. Without ethical action the individual cannot be re-enforced by the action of his fellow-men; he cannot have institutions back of him—the family, civil society, the state, the church.

The fifth study, or literature and art, is called “æsthetics,” or, as in our Council programme today, “the æsthetic element in education.” I am sure that we can understand it better if we approach it, as we have done in this paper, by considering the hierarchy of studies—mathematics, grammar, biology, and history—on the way to it. For we have already become familiar with the trend of the whole. We have the general spectacle of a world of matter acted upon and organized by a world of mind or energy. From the mathematical, or inorganic, field we ascend to plants and animals organized by the principle of life. Then we come to the world of man, in which individuals unite to form social wholes, and see the ethical idea which forms the structures of institutions. For man as individual cannot form a member of an institution unless he is moral. Morality is, in fact, a name for the kind of action which will not injure others nor obstruct their freedom—the name for deeds that will re-enforce the deeds of others.

The manifestation of mind or self-activity on matter appears first in plants and animals. For all living being has self-activity. But there is a higher form of manifestation, and that is found in history. It is, as we have seen, the smaller individual selves of men forming above them bigger selves, or social selves, such as states and nations.

Art and literature, which are the æsthetic activity of men, have also for their function the manifestation of energy—or mind, or self-activity. And, indeed, it is specially a manifestation, for it essays to create the appearance of it where there is no realization of it. History shows us, not only an appearance of divine reason, but also a realization of it. Art shows us an appearance of it, in fields of mere inorganic being—the mathematical province. It takes matter and shapes it into living forms, and makes it take on poses and movements that express freedom and moral action.

In short, it turns the world of externality, pure and simple, into a world of internality made perceptible to the senses of seeing and hearing. It shapes bronze and wood and marble into temples and statues. It brings out by light and shade and color and perspective on surfaces the paintings and drawings that represent rational and moral beings. It produces sounds, arranged in a tonic system, and can by this means express feelings in a more direct manner than by the plastic arts. Finally, it makes the words of language its art material and reaches poetic expression, the highest of the arts, because of greater compass than all the others and more adequate in its manifestation of reason.

The school has always had literature in all its grades, but not so generally the other arts, except music.

It is the practical part of this discussion to show that architecture, sculpture, and painting should add their healthful lesson to the curriculum of the school.

Let us briefly consider in the remainder of this essay the nature of the several arts and their respective capacities to educate man by the spectacle of reason.

Plato said that "the beautiful is the splendor of the true." This is a definition good for all time. For art renders visible or audible the world of internality and truth—the world of mind or reason is, indeed, the object of the several arts or æsthetic modes of expression.

The several fine arts are, in an ascending scale, architecture, sculpture, painting, music, and poetry. Dancing, landscape gardening, engraving, elocution, dramatic art, and rhetoric are accessory to one or more of the five great departments of art rather than separate departments.

Art appeals to the feelings. It arouses emotions and aspirations, but not appetites. Its effects are, therefore, to purify the feelings. It directs them towards ideals. It is not so much an education of conscious thought as of instinctive judgments in matters of taste. But, as it has to do with ideals, it inspires religious and ethical emotions, and through these indirectly develops thought.

ARCHITECTURE.

The silent lessons of architecture—the impressiveness of its masses, its harmonious proportions, its suggestion of great natural powers overcome by spiritual might—these effects are obvious. Art has an end of its own, and to be art of a very high character it must show that the beautiful object exists for itself and does not exist for the sake of other objects—not even for morals or religion. But, of course, the highest art will be found in harmony with both morals and religion.

There are, as shown by Hegel, three stages to each of these arts, namely, the symbolic stage, wherein a spiritual might struggles without pronounced success against the natural powers which hinder it; higher than this, classic art, wherein the spiritual might has completely subdued matter and force into means of expression for its ideals; third, there is romantic art, Christian art, which expresses the ideal, with more or less antagonism towards what is material and natural.

Thus the architecture of India and Egypt belongs to symbolic art. The human is struggling against the natural, but is not able to subdue it and achieve freedom. The highest achievement of Egyptian architecture appears in the pillars or columns of its temple, crowned with the lotus. For in the lotus capitals there is an approximation towards gracefulness.

Greek architecture is much superior in its expression of freedom. Its Doric, Ionic, and Corinthian columns fully achieve gracefulness. In a solid wall for the support of roof the manifestation of the forces which are struggling and the power of gravity are not so adequate as when the support is a pillar or column. The column being isolated, the effects of gravity are exhibited in the yielding of its capital—its expansion, as in the Doric capital, or the graceful yielding curves, as appearing in the Ionic volute, or the graceful bending of the acanthus leaves in the Corinthian capital. Gravity is manifested on the one hand, but the Greek capital shows how easily and gracefully the supporting column resists the downward force.

The Roman arch is converted into a dome by carrying out its principles on all sides instead of laterally alone. The arch is a ready suggestion, symbolically, of the Roman national principle. Each stone in the arch is relatively a keystone to all of the rest. All depends on each and each on all. Each Roman citizen felt and acted as if he were the keystone to his nation. The dome suggests the sky over all, and hence toleration. Under the dome of the Roman Pantheon the gods of all nations were set up and worshiped. The dome is an appropriate symbol for the state or nation. Each patriotic citizen consecrates his life for the life of the social whole, and each is in turn supported and protected by the rest like a keystone.

Romantic architecture comes to its highest completeness in such Gothic structures as the cathedrals of France and the abbeys of England, but especially in the Cologne cathedral and that of Amiens, and the Sainte Chapelle of Paris. It celebrates the divine, not as something originating in matter and lifted up away from matter by its self-activity, but it expresses, rather, the complete negatoriness of matter, except as supported by spirit. For, instead of expressing the effects of weight or gravity in its slender columns, it expresses rather the support of what is below by what is above. The columns seem visibly to pull instead of to push or thrust. It is the heavens that support the earth. It seems as if the cathedral floor is fastened to the columns, and these pull up and sustain the floor by fastening it to the roof. All the lines point upwards and seem to worship what is above. The Christian religion is expressed in the Gothic cathedral, which has been called "petrified prayer." The Roman dome expresses the universal sway of civil law—a sky of justice which extends over all. The Greek temple shows freedom in matter. It crowns a hill, like a blossom which has ascended from the surface of the earth to manifest a deep inner self-activity of matter itself.

SCULPTURE.

The statuary of Egypt and the Orient does not express freedom; it abounds in stiff and ungraceful lines; but the statuary of the Greeks is the supreme achievement of that beauty-loving people. In the highest period of its perfection it represents so much dignity of character, so much rationality and clear consciousness of purpose in its figures of the gods, that the divine itself seems to be present in material form. Christianity has not been able to express its distinctive ideals in sculpture. It finds painting a far more adequate means. Painting can express sentiment by means of color; it can show subjective feelings and subtle reactions occasioned by the situation in which the theme of the work of art is placed. Modern sculpture is defective through the fact that an attempt is made to express sentiment rather than action. The highest sculpture exhibits the serenity of the soul, even in the presence of danger.

PAINTING.

The proper subjects of painting are to be found especially in the Christian religion and in the situations of modern life that appeal intensely to our ethical emotions. Greek painting, except what has been preserved for us in the frescoes of buried cities, is known to us only through descriptions. From the evidences before us it is safe to say that painting did not find with the ancients its appropriate themes. The subjects of Christian painting are divine love and tenderness, as seen in the madonnas; the soul, supported by its faith in the divine, manifesting its constancy, even

when enduring the bodily tortures of martyrdom ; the divine, gracious and forgiving, even in the crucifixion scene ; the transfiguration, reflecting the light of the soul when seeing pure truth ; the Last Supper, exhibiting the emotions of the good when betrayed by the bad ; the last judgment, showing the return of the deed upon the doer: not so much action as reaction, not so much the deed as the emotion aroused in the depths of the soul by the presence of injustice and hate.

MUSIC.

Music has the form of *time*, while architecture, sculpture, and painting have the form of *space* ; hence it can express all the steps in the genesis of the situation which it portrays, and is not confined to a single moment like the special arts. The group of statuary, the Laokoon, for instance, must seize the highest moment of the action and present it. In this highest moment we can see what has happened before, and what is likely to happen in the time that follows (Goethe has discussed this admirably in his essay on the Laokoon). It will not do for the sculptor to attempt to present us in his work of art the entire completion or working-out of the theme ; he must seize it in the middle, where the spectators can easily read the past series of actions and motives, and forebode what is to succeed. Painting is not so closely confined to a point of time as sculpture. Painting can idealize space through perspective, light and shade, color, clearness and obscurity. While actual size, actual length of line, is necessary in architecture, in painting it can be represented by perspective. Not only the largest temple of the world, but even Mont Blanc, could be painted on a piece of ivory which could be covered with one's thumb. Painting, moreover, by reason of the fact that it can present to us sentiment through the aid of color, finds the limitation of its theme to a single moment of time less important. But music can take up the whole series of actions and reactions which are presupposed by a serious situation of the soul, and can carry these all through to the final *dénouement*. The material side of music is found in the structure and peculiarities of the several musical instruments : vibration by means of strings, columns of air in wind instruments, and, above all, by the vocal chords of the human being. A tone is a repetition of the same wave-length. One tone can produce with another one which has an agreement with it partial or complete chords and concords ; with another tone not agreeing with it it produces a discord. There is a natural order of tones, partly discordant and partly concordant, which forms the scale. It includes what is called an octave. An aria starts from the fundamental tone of a scale, or from its third, or fifth, and, by departing from the fundamental tone or from those kindred with it, expresses its alienations and collisions. Finally it returns to the fundamental tone, or one of its close kindred,

and the problem is solved. There is also counterpoint, which, like the persons in a drama, expresses a concordant or opposing aria to the chief one. With these resources music excels all the plastic arts in its ability to express problems and collisions of human life and their solution. Emotional disturbances and the restoration of harmony naturally take on this form of expression. But there is the music of sensuous pleasure, and, opposed to it, the music of moral action. The Italian boat song or the Scotch reel may express the former, and a sonata or symphony of Beethoven will express moral action. Architecture has been called "frozen music." Neither architecture nor music deals directly with the shapes of rational creatures or with the image of the human form divine; they are confined to proportions and symmetries.

POETRY.

Poetry is the form of art that unites in itself all the others. It is closely allied to music—the time art—and through the imagination it can reproduce each and all of the space arts. It can do more than this; it can, through its appeal directly to imagination, transcend the time limitations of music, and the space limitations of architecture, sculpture, and painting. There is the poetry of the nation, or epic poetry, the poetry of society, or the drama, and the poetry of the individual, or lyric poetry. Comedy shows us a collision which has arisen between the individual and some social ideal, in which the discomfiture of the individual is not so deep as to destroy him. The social organism in which man lives is such as to convert his negative deeds into self-refuting or self-annihilating deeds. This occasions laughter, when the individual is not seriously injured by his irrational deed. Tragedy, on the other hand, shows us a serious attack upon the social whole, and the recoil of the deed upon the doer, so that he perishes through the reaction of his deed. Tragedy, however, requires as a necessary condition that the individual who perishes shall have a rational side to his deed. A mere villain is not sufficient for a tragic character; there must be some justification for him.

The greatest poets are Homer, Dante, Shakespeare, and Goethe, and these artists are in the truest sense educators of mankind. The types of character exhibited in their literary works of art—Achilles, Agamemnon, Ulysses, Macbeth, Hamlet, Wilhelm Meister, and Faust—have helped and will always help all mankind to self-knowledge by showing them how feelings become convictions, and how convictions become deeds, and how deeds react upon the doer through the great organisms of human society. The world-wisdom of a people is largely derived from its national poets, not as a moral philosophy, but as vicarious experience. Aristotle said that the drama purifies the spectator by showing him how his feelings and convictions will result when carried out. Without mak-

ing the experience himself, he profits by participating in the world of experience depicted for him by the poet. It is more or less in human nature to recoil against direct advice, especially moral advice. We do not like to have its application made personal: but in the work of art we see the moral energies of society acting upon ideal personages, and the lesson to the spectator is more impressive and more wholesome, because it is accepted by him in his freedom and not imposed upon him by external authority.

THE ÆSTHETIC ELEMENT IN EDUCATION.

BY MISS MARY E. NICHOLSON, PRINCIPAL OF NORMAL SCHOOL,
INDIANAPOLIS, IND.

Whoever goes to work seriously to plan a general system of education finds that he must first give an adequate answer to the question, "What is the destiny of man?" This being determined, everything in his scheme must be made to serve as means to the end of realizing that destiny.

The acceptance of the great democratic idea of the essential value of each individual soul renders it still more necessary that he find the absolutely universal principle in humanity—that which is common to Caliban upon Setebos and to the great mind who gave us the picture of him.

It is easy to train for a class, be it that of servant or master. The end aimed at is near. It has sharp boundaries. But who is ready to say just how the finite mind is to be helped to the realization of its infinite possibilities? Some things, however, we do know.

In the final synthesis, without which all analysis is worthless, it is seen that the true, the good, and the beautiful are essentially one, since each is an expression of the divine spirit; that the demand of the soul for beauty is as legitimate as is its hunger for truth..

It is a hundred years since Schiller, in his "Æsthetic Letters," pointed out to the modern world the fact that play is the earliest form of the artistic impulse. Play is its own end. It is prompted by joy; in it the creative spirit acts with freedom. It begins with the beginning of conscious life, and continues until stifled by care or overshadowed by a sense of duty.

Another remarkable modern insight is that of Mr. John Fiske, who, in his study of the development of man, has shown with great clearness that man's progress is directly proportionate to what he calls the prolongation of the period of infancy or childhood.

Here are two starting points of great value to those interested in education. From the first it is easy to trace the much misused phrase "art

for art's sake" and find in it a certain validity. Play, which is the earliest form of artistic expression, is its own end. Beginning with the first spontaneous bodily movements, repeated solely because they give pleasure, on through the process of imitation of nature, we reach the sphere of free art, in which man transcends nature and expresses himself, not as he actually is, but as he may become. What, then, is art? In a most general sense it is the free expression of man's spirit in visible forms; in a stricter sense it is the free expression of man's spirit in a form perfectly adequate to the representation of the thing to be expressed. What is the function of art in education? It is to reveal to man his ideal self, and thus stimulate him to action for its realization.

Since the educational value of art is self-revelation, it follows that man's truest thought, his highest feelings, and his noblest deeds are fit subjects for artistic treatment, and that their presentation in beautiful form cannot fail to awaken the desire for self-realization. Not less clear is the universality of its message. Art in its various forms—painting, sculpture, music, poetry, architecture—appeals to all. It belongs, then, not to the realm of special, but to general, education. It is not alone for a favored class, nor does it especially fit one for a trade. It trains the spirit for free, harmonious living, in conscious accord with the divine order. As a result the soul becomes sensitive to beauty, receives it with joy, seeks it, judges it intelligently, and endeavors to give it expression in its own person and environment.

Assuming the value of æsthetic training on a general system of education, the practical question at once presents itself: What are the means to the desired end? They may all be classed under (1) proper environment, which is the source of all those influences which we receive unconsciously; and (2) instruction, which will cover all that comes to us consciously through our own efforts.

If either of these is more potent than the other, it is the first "environment." It is so subtle and far-reaching, so continuous and persistent. When we are really convinced of this, the schoolroom will be built, furnished, and decorated with the greatest care; the location, the proportions, color, furniture, decoration will be a matter of serious thought. The severest and purest taste should dominate in all this.

This will require the banishment from it of all that is tawdry, grotesque, and meaningless. Everything in the room must be measured by the standards of utility and beauty. Has it a distinct practical use and, therefore, a place by necessity, or does it minister in some way to the spiritual nature by creating joy?

Nothing but the best of its kind is good enough for a child; nothing but the best of its kind should be placed before him.

When the present commissioner of education took charge of the St.

Louis schools some years ago, he found that the building committee, anxious to distinguish its administration, had ordered some new buildings finished in the richest wood of the Mississippi valley, the black walnut. The order was at once countermanded and oak or yellow pine substituted for the walnut. Mr. Harris felt it to be a matter of the greatest importance that the rooms be light and cheerful. Under influences derived from environment must also be placed the hearing of good music and of rhythmic verse beautifully read. Here the same severity and purity of taste will at once rule out much that has not only been considered good enough, but excellent. Nothing should be tolerated except that which, it is believed, will minister to the higher spiritual nature.

The development of machinery, which has made it possible to reproduce the crude and ugly a million fold, makes it necessary that those who, by virtue of their position, have power to control, to some extent, the surroundings of those under their care, shall exercise the greatest vigilance in determining what those surroundings shall be.

It is chiefly through environment that the taste is cultivated and æsthetic standards established. Taste is not inborn. It is a matter of cultivation and requires for its development the constant presence of ideals.

Coming now to *instruction*, the second great means of the development of the æsthetic sense, these questions present themselves: What are the subjects in which instruction may be given, and, how can this be best given?

Instruction in any art is best given through the practice of that art. Many of the occupations of the kindergarten afford excellent ground for artistic development. There is not a single one of the fine arts for which the foundation may not be laid in the amusements of children and continued through their early school life. Without instruction they build, they model, they draw, they color, they sing, they act little dramas, they dance.

The instinct prompting to expression is there. What they need is the ideal which shall guide this expression and assist them in producing the beautiful rather than the ugly, the harmonious rather than the discordant.

As a childish mode of artistic expression dancing has by no means had its proper place. By this is meant dancing in the Greek sense, which is a rhythmic movement of the whole body to some simple melody of pronounced rhythm and slow movement. Little children should early be taught to dance together; the figures should be simple, but with sufficient variety of parts to enable the child to guide his movements by those of his companions and thus, through concerted action, develop the sense of harmony and of courtesy. When gymnastics is introduced,

it should be a system in which the æsthetic element is prominent. Exercises having for their sole purpose the development of muscular power should be reserved for adult prize fighters.

The result of all this will be strong, graceful bodies, with a dignified carriage, such as served as models for the Apollo Belvedere and the Venus of Milo.

Of all the arts music most clearly and directly expresses the heart of man. Formed out of vibrating air, existing only while it is being created, subtle, elusive, it is still a ready means of expressing the hopes, the fears, the longings, and the aspirations of the soul of man.

The plaintive minor expresses his unsatisfied longings, the triumphant major his sense of power to attain. Music is thus a powerful instrument which, acting from without, may be used to uplift or to degrade, to refine or to harden. In the "Pedagogical Province" Meister found that the art of singing formed the first step in education; that everything else was subordinate to it; that from it paths radiated in all directions.

The artistic possibilities of children's singing were shown by the choruses trained by Mr. Tomlins for the World's Fair. People who knew little of music and people of the highest musical culture were alike entranced. The quality of tone, the artistic expression, were marvelous. All this was the work of the wise director, and is possible in some degree to anyone possessing artistic power. The loving mother instinctively makes her cradle song simple and tender. Its simplicity is the source of its charm and power. He who writes a great symphony subordinates, co-ordinates, harmonizes the parts, until each tone in its place is necessary for the artistic whole. A great oratorio, a great opera, or a great symphony is perhaps man's most wonderful creation; yet a song taught to a child ought to be as good of its kind as the most perfect and complex musical composition. This is possible, and will become real when we have more teachers like Mr. Tomlins.

Aristotle, who, in his scheme of education for free-born men, makes great use of music as a means of development, insists that the music of children shall be of the simple, manly type, free from sentimentality.

Properly trained young people will bring with them to the high school power to read simple music and to render it with taste and precision. Now should begin a study of masterpieces, which will still further purify the taste, refine the spirit, and bring joy into life. In making selections for this study, it is not enough that a thing be not bad; it ought to be aggressively good.

The two great arts appealing to the soul through the eye are painting and sculpture. They demand for their full appreciation a cultivated sense of color and of form. Training for the interpretation of great

works of art may be commenced at once through drawing and modeling. Modeling is far simpler than drawing and should precede it in practice. The teacher's field for instruction and for the cultivation of the love of the beautiful here lies in the selection of models. Beautiful things are as easy to find as ugly ones, if there are eyes to see them, and the difference to the child in the matter of his development is vital. These models should never be type forms, mathematical solids, but living things, taken directly from his own world—things which have ministered in some way to his inmost being. The first law of art from the side of its origin is *self-expression*. To ignore this law is to set sail without compass or rudder.

Drawing and coloring, commenced as amusements, should be continued under careful guidance, the subjects to be taken from nature, leading up to drawing from casts and from life. Somewhere near the beginning of the high-school course there should be commenced a careful study of the development of art. This might very properly begin on the decorative side, with a study of historic ornament. The materials for this are now abundant and not very expensive. The study itself, when conducted by a skillful teacher, is of absorbing interest.

The further study of the development of art ought to form an integral part of a general course in history. Such a course ought to be given in every high school and college. It is not a matter of accident that the great epochs in the history of nations are, for the most part, those which are characterized by the greatest development in some form of art—in literature, architecture, or sculpture. Indeed, it is the art which represents in the fullest, completest way the life of that time. It is here that man, freed from the domination of utility, has freely expressed himself.

Can anyone be said to know much about the Middle Ages who is unfamiliar with the rise of Gothic architecture, and who knows nothing of the cathedrals of Cologne, Milan, Strassburg, and a hundred more? These marvelous buildings were the work of no class and of no generation, but of the whole people, who, during centuries, laid stone upon stone that a structure might rise commensurate with their idea of the universal church. Man's aspirations for a better life found expression in these airy pinnacles, rising hundreds of feet into the air; in these flying buttresses, offering a firm support below, but soaring above. His limitations and his crude notions of the future life appear in the carvings which adorn them. The perfect arch which was Rome's contribution to architecture is in exact correspondence with her theory of government.

An outfit of casts, engravings, and photographic reproductions should be provided for such teaching, just as Bunsen burners, retorts, air pumps, and microscopes are provided for laboratory work in science. These works of art should be placed in halls, corridors, and upon the walls of

rooms, in constant view of all. The air pump, the retort, has meaning and interest for only a few ; a work of art gives something to all ; its message is universal.

What is it that one should know of Greece in order to have any adequate idea of its place in human development and the debt of the modern world to it ? Marathon, Thermopylæ, Salamis, Plataea ? Yes, certainly. These are inspiring words, but other nations can show battlefields where men as cheerfully, as joyously, laid down their lives that their country might be free. Hellas is something more than these :

"I am the Muse who sang alway
By Jove, at dawn of the first day.
Star-crowned, sole-sitting long I wrought
To fire the stagnant earth with thought.
On spawning slime my song prevails ;
Wolves shed their fangs and dragons scales.
Flushed in the sky the sweet May morn,
Earth smiled on flowers, and man was born.
Then Asia yeaned her shepherd race,
And Nile substructs her granite base ;
Tented Tartary, columned Nile —
And under vine, on rocky isle,
Or on wind-blown sea marge, bleak,
Forward stepped the perfect Greek.
That wit and joy might have a tongue,
And earth grow civil, Homer sung."

The Delphic Oracle ; the Parthenon and the great Athena, in whose honor it was built ; the statue of the Olympian Zeus ; the "Prometheus" of Æschylus ; the "Antigone" of Sophocles ; the "Alcestis" of Euripides ; the "Apology" and the "Crito" of Plato — these are a few of the topics that should be studied as a part of Greek history. Good translations of some of the plays of Æschylus, Sophocles, and Euripides cost but a few cents each, and should be read under the direction of a teacher who can fill every difficult place with meaning.

There is nothing which will so quickly and so thoroughly refine the taste as a careful study of Greek architecture. Its different styles ought to be as familiar to us as our neighbors' faces. Does not the fact that the temples of Zeus and Athena were built in the plain, sincere Doric, and those of Venus in the ornate, flaunting Corinthian, tell its own story ?

Along with this should go a study of the development of the Greek drama, and the great open-air theater, where each citizen had a seat, and where he heard the great plays which portrayed the religious traditions of his race.

The outcome of such a study will be, first of all, knowledge far more complete than is usually possessed by those who study Greek history. But better than this, here will have been formed, through this acquaintance

with the most artistic of all races, a love of beauty and a standard by which to judge it.

Greek art recognized its limitations and worked within them, producing works which seem perfect of their kind. The sense of proportion, of restraint, together with perfect freedom, are there. It is just these qualities which give it its external value, and make its study an incomparable educational discipline. Among all peoples, ancient or modern, the Greeks stand pre-eminent in sound educational theories. Their gymnastics and music, which gave training for the body and training for the mind, ran along together, and in each the æsthetic element was prominent. The result was *splendid individuals*.

But this training was for men who formed a leisure class, resting upon a substratum of slavery. The work of the world was then done by slaves. The Greek educational problem was simple and easy of solution beside the one that today confronts this great democracy. Old class distinctions have vanished. The Republic has said that all men must labor, and that all men must be educated. Manifestly this is impossible, except through the prolongation of the period of childhood, and the wise use of every instant of that time. The wisdom of any particular use of this period will be determined by our theory of man's destiny and by the conditions of the society for which we are fitting him — the one ideal, the other actual.

It would be folly not to recognize the present economic conditions, which are increasing at an enormous rate the ratio of employé to employer; the effect upon the soul of this sharp division of labor, consequent upon the rapid introduction of machinery, all of which tend to curtail the field of individual expression and make labor itself mechanical.

However, these are the conditions under which he is to live, against which he must reach or be utterly crushed. The cry of men like John Ruskin and William Morris has a profound meaning, and must be headed by those who love their kind. The first to heed it should be those who have charge of the period of childhood. What can be done in this preparatory period that shall enable one, later on, to overcome the deadening effect of labor in which there is no joy — labor whose product is not loved, either because it is not beautiful or because the producer has no share in it? A wise answer to this question will be a boon to the modern world.

Those who take part in the discussion today hoped to show that a cultivation of the love of the beautiful and of the power to express it should find a place in any general system of education; that the warrant for this is found in the nature of the soul of man; that art, which is the highest expression of this side of man's nature, is a powerful instrument which may be used for his uplifting; that opportunities for this do not need to be sought; they are abundant and everywhere present.

The discussion was not meant to be exhaustive, but suggestive.

DISCUSSION.

[REPORTED BY L. H. JONES.]

RICHARD JONES, Albany, N. Y., being called for, explained the experiment now being made by the University of the State of New York in art education. Out of the funds at their disposal the regents of the university have purchased photographs of great works of art, covering architecture, sculpture, paintings, etc. These are divided into groups and are loaned to schools for a definite period. Their use has been intended mainly to stimulate and vivify the work in literature, and this comes directly under my notice as inspector of this study for the state, under direction of the regents. While the matter is to some extent still an experiment, its influence for good is distinctly noticeable.

F. LOUIS SOLDAN, St. Louis, Mo.—A similar experiment has been tried in St. Louis. The Art Committee of the Wednesday Club bought 160 pictures of worthy art subjects and divided them into ten groups, so that each group should contain at least one representation of each kind and each important age. These pictures of a group are held by one school for ten weeks, and they are then exchanged for another group. Superintendents and teachers lecture to pupils, explaining the history of the picture, its motive and artistic significance.

One good effect, in addition to many others, has been to stimulate pupils, teachers, and patrons to buy pictures for the adornment of schoolrooms.

NATHAN C. SCHAEFFER, Harrisburg, Pa.—I wish to propound a question. We have heard much of the value of nature study from a scientific standpoint. We hear little of nature as the home of beauty. What is the comparative place of beauty as we find it in nature with beauty as we find it in art, as a means of education? I would like to hear from Dr. Harris.

W. T. HARRIS, United States Commissioner of Education.—I smiled at the question of my friend Schaeffer, remembering my controversies with Colonel Parker over the same question. He finds the source of beauty in nature; I affirm art superior to nature in this respect. Art undertakes to give a manifestation of reason instead of a realization of it. History and nature do the latter. No scene is really worth painting as it really is, but as it is seen by the painter after certain changes which make it fitter to express beauty and reason. Church's Heart of the Andes is highly idealized, and thus expresses the feelings of the artist as no mere reproduction can do. Some pictures are mere photographs. A landscape photograph is not really beautiful, though one may like it for its truth to nature. The true picture is symbolic; has in it the feelings of the artist, expressed by his arrangement and treatment of details. By his arrangement he makes us see or appreciate more than is shown—gives us a vicarious power of the senses, so to speak, enabling one to take the place of others. Nature, by her arrangement of elements, gives us the sense of freedom—freedom from carping care; but art alone puts these elements together so as to preserve this freedom and exhibit perfect reason.

D. L. KIEHLE, Minneapolis, Minn.—I cordially indorse what Dr. Harris has said. In our school work we have approached nature from the scientific side. This I believe to be a mistake—we should seek to lead pupils to love nature.

HENRY SABIN, Des Moines, Ia.—I think we have had no more important subject up for discussion in this Council. The education of the next century is wrapped up in the thesis treated so ably here this afternoon. I would like to ask a question of Miss Nicholson: What would you do if you were principal of a four-room building, each room having dirty walls, with cracked plaster, etc.?

MISS NICHOLSON.—I would have the walls whitewashed (or better, buff-washed), if I had to do it myself. Then I would bring in nature. Plants are the safest form of schoolroom decoration for general use.

W. T. HARRIS.—Photographs of great works of art are safer than poor original pictures.

C. B. GILBERT, Newark, N. J.—The contemplation of great works of art, as contended for in this discussion, is excellent. But this is not all that should be done. There should be a construction side. Drawing should be made to contribute to æsthetic culture, while the child is securing skill in his work. I should like to have Dr. Dewey tell us how this may be done.

JOHN DEWEY, The University of Chicago.—I do not know. I believe drawing should be made to contribute to the end of art education. One of the first principles of art education is that of free self-expression. Drawing should contribute to this end.

S. G. WILLIAMS, Cornell University.—Is not the technical knowledge necessary as a means of developing the art sense?

JOHN DEWEY.—History shows that nations have gained the power to achieve while developing the appreciation of art effects in education. Two interesting experiments in attempting to carry the two hand in hand are those undertaken in Pratt Institute and in Brookline, Mass.

On the request of Mr. Gove, of Colorado, the chair called upon Principal W. H. Smiley, of the Denver High School, to give the plan pursued in his school.

W. H. SMILEY.—The study of the outside world for classification has led us away from the æsthetic study of nature—so our pupils miss the joy they should obtain from such study. The Denver High School has had some help from the public library. We have secured many illustrations from magazines. We advised this in connection with the work in history. The school authorities have bought 100 fine pictures of Seemans, Wandeholde, Leipzig, at a cost of \$30.

UNIVERSITY IDEALS AT PRINCETON.

BY PROFESSOR A. T. ORMOND, PRINCETON UNIVERSITY.

Before entering on the account of the university which I have the honor to represent before this association, permit me to express my belief that an institution of learning is not to be regarded as an isolated unit, or as endowed with any abstract irresponsibility. It cannot ignore its relations with the academic sisterhood to which it belongs, or its place in the educational economy of which it is a part.

A school is also an organized form of life, not to be developed mechanically from without, but rather organically from within. This brings it under the rubrics of growth and history. Its life becomes gradually rooted in the traditions of the past, and the course of its development, as well as the modifications of type it undergoes, will arise normally from the coursing of its energies through channels which have been worn by the attrition of its past experience.

So conceived, the laws of growth and history may be regarded as restrictions and limitations. But, from another and truer standpoint, they are the normal conditions of real progress. Life is not mechanical, but organic. Life, development, and history form an inseparable trinity. The past of a living institution is the rich soil in which it grows, and its traditions are accretions which fertilize its roots and nourish its development. These accretions are, in fact, the main source of what is called its spirit and the atmosphere in which its richest and most characteristic products are brought to maturity.

Viewed in the light of their origin, the universities of our country may be distinguished into two groups, according as they have been founded at the outset as universities, or have developed out of college foundations. Princeton is an old college that has developed slowly into the proportions of a university. Again, from the point of view of control, universities may be classified as ecclesiastical, state, or independent. Princeton belongs to the third class. Instituted by a body of men whose affiliations, it is true, were mainly with one branch of the Christian church, the college was chartered by the state as a non-sectarian institution, under the control of a self-perpetuating board of trustees. It has maintained this independence of church and state, while cultivating intimate and vital relations with both. To understand the position of Princeton among our American institutions of learning, it will be necessary to remember that as a university she has developed out of an old college whose life and history are her own; and, secondly, that, while in a large sense dominated by Presbyterian influence, she is, and has been, absolutely free from ecclesiastical jurisdiction.

Chartered in 1746, and again in 1748, the young college was founded for the twofold purpose of promoting sound learning and true religion. The most pressing demand which a college had to supply in those early days was that of the church for an educated ministry. But the other professions, as well as the public service, needed trained men, and it was mainly to supply these that the older colleges of our country were established. Harvard and Yale had been modeled after the English college, and Princeton embodied the same type, with the traditional course of classical-mathematical instruction as a nucleus around which other branches of learning were gradually organized.

It is not my purpose to dwell on the early history and struggles of the young college, and only passing allusion can be made to the well-known story of its splendid contribution to our revolutionary struggle, under the leadership of its great war-president, Witherspoon. Only mention, also, can be given to the post-revolutionary period, during which, under the administration of able and devoted men, Princeton, not without her full share of struggle and adversity, maintained her prestige among the sis-

terhood of colleges, enlarging her resources, increasing her staff of instructors, expanding her curriculum by the introduction of new studies, including the leading branches of science, as the demand for them arose, and, in connection with growing libraries and facilities for studies, developing the mechanism of better methods of instruction.

Situated in the middle states, and holding, territorially, a key to the West and South, as well as the eastern seaboard, Princeton became in her constituency more cosmopolitan than any other American institution. She had an especial hold on the South, drawing, perhaps, one-third of her students from that region in the period immediately preceding the Civil War. She suffered more from the outbreak of the war, therefore, than any other northern institution, losing at one blow a large percentage of her students, and finding herself seriously crippled in her resources. From the effects of the war Princeton had scarcely begun to recover when, in the year 1868, a new era in her history was opened.

It must be admitted that, during the later fifties and the sixties, Princeton lost something of the relative position which she had held among American colleges during the earlier period of her history. For this lapse there were other causes besides the reverses of the war. It was during this period that science began to knock imperatively at the doors of our colleges for more generous recognition than had been accorded to her in the old curricula. Now, while Princeton had not been behind-hand in her recognition of science, as her record in chemistry,¹ physics, astronomy, and geology bore witness, yet there is an end to all things, and, under the old system of one required course for all, the limit of expansion had been reached. Princeton found herself at the dividing of the ways, and was forced to choose between the alternatives of either remaining a small college or opening her doors to the new studies by giving an elective choice to her students. The convictions which shaped the policy of the college at this critical period proved to be over-conservative, and the alternative of the closed curriculum was honestly, but, as I think, mistakenly, adhered to.

The year 1868 marks an epoch in Princeton's history. In that year James McCosh, a Scotchman like Witherspoon, and a distinguished old-world educator and thinker, became president of Princeton, and the old college entered upon the most important period of its development. The inaugural of Dr. McCosh, as well as other utterances of his, clearly indicated his wise and statesmanlike grasp of the situation. By a species of intuition, he realized the fact that our most representative institutions were normal products of our national life, in response to whose needs they had grown up and assumed their present form. What they required, therefore, in order to realize their highest efficiency was development and

¹ The first college chair in chemistry was founded at Princeton in 1795.

modification, rather than revolution. In the main Dr. McCosh was in sympathy with the education and religious traditions of Princeton. But he saw the mistake that ultra-conservatism was committing, and set about with characteristic energy to undo the evil. From the beginning of his administration Dr. McCosh cherished the ambition of developing the old college into a university. The realization of his plans was made possible by the unstinted generosity of such patrons as Mr. John C. Green, who poured out their treasures with almost lavish munificence. Every department of the college felt the transforming touch. One of the first acts of McCosh's administration was the laying of the foundations of the old John C. Green School of Science, an institution in closer organic connection with the university than the Sheffield School at Yale, but discharging a corresponding function in its educational economy. Henceforward the rights of science were secured, and the new learning was to be permitted to form itself in accordance with its own type. The founding of the School of Science marked a radical departure in the policy of the college. But it was only one step in the transition to the university. An indefinite expansion of studies on the side of humanities was also initiated. McCosh's new scheme of studies embraced the threefold categories of literature, science, and philosophy. These were the rubrics under which the *studium generale*, which was to constitute the soul of the university, was to be developed. In order to realize this scheme, the Procrustean bed of the old required course of study must be broken up; not by abolishing it, but by incorporating with it the principle of elective freedom. A solid nucleus of required studies was to be maintained as the backbone of the courses, but in connection with this a graduated scheme of electives was to be introduced, strictly limited in the lower years, but expanding until in his senior year the student had practically *carte blanche* in his selection. An indefinite expansion of the curriculum of studies was thus made possible. The faculty of instruction was constantly enlarged to meet the growing demands. Departments were differentiated and developed, and advanced attainments were encouraged by the founding of scholarships and fellowships, while to the undergraduate courses a graduate department was added and organized on the basis of university fellowships and a system of higher degrees. Dr. McCosh devoted his energy to the enlargement of the curriculum, and to the promotion of advanced scholarship and research along every important line. As outward and visible marks of this internal activity there arose, as by magic, the city of buildings which has made Princeton famous, including libraries, laboratories for experimental research in various departments, and museums of science and archæology. Dr. McCosh's hand transformed the whole life of the college, trebling its body of students, raising it in its resources from thousands to millions, fostering a spirit of true investigation and study, consolidating

its alumni and organizing them into a body of the highest efficiency. It was McCosh's brain and energy that supplied the idealism as well as the motive power of Princeton's transition from the college to the university. In saying this I do not wish to detract from the merits of any of his contemporaries or co-workers, or from the just meed of praise due to any of the living agencies connected with the institution. Under the brilliant administration of President Patton the longed-for consummation has been reached in the dedication of the infant university on the one hundred and fiftieth anniversary of the old college's life. Compared with the larger realization of the present, the period of Dr. McCosh, was, in a sense, a day of small things, but the time is a long way off when Princeton will cease to venerate the man whose large intelligence and invincible determination rendered her existence as a university possible.

Princeton University inherits the traditions of the college. These bind it closely to the life of the nation, and at the same time, being incorporated in the constitution of the university, form an important ingredient in its spiritual life. One of its most potent traditions is the series of events which identified its early experience so closely with the formative period of the nation's life. This politico-national tradition has supplied rich material for the nurture of historical and political studies, although it has manifested its power, not so much in actual literary production as in a certain spirit and atmosphere pervading the life of the institution and molding the character of its students. Again, the university inherits from the old college the classical tradition and its devotion to the humanistic ideal of learning and culture. The institution of the scientific cult and the natural-science type of education have not had the effect of dethroning the humanities. The tendency is rather toward a correlation of the two spheres of knowledge under a broader concept, in which pure science and pure literature shall stand side by side in republican equality. If, however, the university were forced to declare its supreme love, it would, I am fain to believe, place the diadem on the brow of the humanities, as lying nearest to the spiritual life of man, and as supplying the most potent stimuli to mental culture and development. This preference would not be influenced, however, by any lack in the traditions of scientific study. One of the first colleges to respond to the demands of science, Princeton has had in chemistry her McLean, the first master of Silliman; her Henry in physics, her Alexander and Young in astronomy, and her Guyot in geology.

To the traditions already named we need to add the commanding place which, since Edwards of the "iron heel," has been held by the philosophical studies, a primacy which, beginning with Edwards and receiving the stamp of Witherspoon, finally led, under McCosh, not simply to the expansion of the department of philosophy into a school,

but also to the conception of a trinity of categories—literature, science, and philosophy, into which the *studium generale* was to be distributed, and over which philosophy was to preside as the unifying principle of the whole. It may well be that for ordinary purposes the dual categories of literature and science are sufficient. But Dr. McCosh saw clearly that in the ideally complete scheme of knowledge the function of unification is essential, and that for this task neither literature nor science is competent. The keystone of the arch of culture must, therefore, be supplied by philosophy.

I have dwelt with such tediousness of detail on the historical antecedents of the university because they are the things which enter into and determine its spirit and atmosphere. The atmosphere of an institution affects both teacher and student, and if it is sound and good it imparts to the older institution a culture-power which the younger members of the fraternity can only acquire with age. I feel like accentuating this fact here as an offset to the charge commonly made, and with a measure of truth, that the older institutions are hampered and limited by their traditions. Granted, but there is a compensation that to those who have felt the power of these things more than atones for the loss.

The conditions of Princeton, and in particular its position and space limitations, have largely predetermined the lines along which its most fruitful work may be done. Located in a small town almost midway between Philadelphia and New York, Princeton has not felt in a pressing sense the demand for the development of professional schools. It is true that an independent school of theology exists under the shadow of the university, and various attempts have been made in the past, which may be successfully renewed in the future, to found a school of law. But a school of medicine seems to be impracticable. Important, however, as faculties of law, medicine, and theology may be as adjuncts to a university, the history of universities goes to prove, Professor Laurie to the contrary notwithstanding, that their existence is not essential to the exercise of a true university function. Dr. McCosh conceived, truly, as I think, that the *studium generale* constitutes the soul of the university, and that in the facilities it affords for scholarship and research the main function of a university is conserved. Princeton has, it is true, schools of civil and electrical engineering, which lead to separate degrees, and she has schools of art, literature, and philosophy, which are crowned by no distinctive degrees of their own. But her central ideal is the promotion of pure learning, if we understand by that term the pursuit of knowledge apart from immediate utilitarian ends. Be it understood, however, that Princeton has no quarrel with the practical. This, in the large sense, she seeks to conserve, while only opposing, as too narrowly practical, that mercenary spirit which is blind to all but immediate results, and which worships in

the temple of learning solely for the sake of its loaves and fishes. On the other hand, the legitimate demands of utility cannot be slighted, and Princeton has nothing but generous recognition for those schools whose position and opportunities enable them to go beyond her in responding to the demand for technical education.

Of the present facilities of the university for doing the work it has set itself to accomplish I can speak but briefly. A concrete example will be more telling in this connection than any general statements. Taking, for obvious reasons, the department of the university with which I am most familiar, that of philosophy, the work of this department begins in junior year with required instruction in the elements of logic and psychology. This elementary work is followed in junior year by an elective in the elements of experimental psychology. In senior year the experimental work is continued through the year. In addition to this, an elective in brain psychology, accompanied with practical demonstrations, is given in the first term, while a course in advanced general psychology runs through the year. The experimental work is accompanied with practice in the psychological laboratory. The psychological work is carried on into the graduate department, experimental courses being conducted by an experienced demonstrator, while the general work culminates in the study of genetic and social psychology in the psychological seminary. The work in logic is continued through senior year, courses being given in induction, symbolic logic, the theory of probabilities, and the psychology of logic, and culminates in the graduate department in the work of the philosophical seminary. In the other branches of philosophy a two-years' course is given in the history of philosophy, open to juniors and seniors. Courses in constructive philosophy, including epistemology and metaphysics, run through senior year, while in the graduate department the work is continued by courses in contemporary philosophy and in the philosophical seminary, which runs through the year and is devoted to the study of the works of philosophers. The institution of a graduate seminary for special research in the history of philosophy is also in contemplation. Outside of the lines above indicated, there are given courses in the logic of the sciences, in ethics, and the philosophy of religion, as well as practical opportunity, open to both undergraduates and graduates, to read the Greek and Roman philosophers in the original. The departments of ethics and the philosophy of religion are not, as yet, fully developed, and in other parts of the scheme empty categories exist to be filled by the departments of the future. In pedagogy, also, while its historical aspect has been ably treated, little has been done as yet on the psychological side. If to this account we add the fellowships and prizes which the department offers, and which we hope largely to increase; the organized courses leading to the degree of

doctor of philosophy, which are formed largely upon German models, and the constantly enlarging facilities for study and investigation supplied by growing libraries and other instruments of study—some conception of the philosophical work and aims of the university may be formed. Something has already been accomplished in the department, but much remains in the form of a programme for the future. The representation of the work in philosophy may be taken as descriptive, *mutatis mutandis*, in a greater or less degree, of what is going on in the leading departments of literature and science. Princeton is not lacking in intellectual life, and, while her university energies are as yet largely unorganized, there is nothing amorphous about the ideal that she hopes to realize in the future.

Respecting the future of Princeton I prefer not to indulge in speculation or predictions. I propose rather to select and accentuate certain articles of academic faith which are likely to act as conserving forces in her future development. The idea of a university, as conceived at Princeton, is a comprehensive category, which includes the college, but does not stop at its limit. Within its scope, the terms undergraduate and graduate represent intra-university distinctions. Princeton, as I have said, is an institution of the synthetic type, one in which an old college has passed into a university without losing its individuality. Now, a university may exist for the prosecution of a single specialty, or it may exist solely for graduate work, leaving the college function to others. In either case the problem is simplified, and the institution escapes some of the most burning questions of the academic world. I cannot but think, however, that it purchases this immunity at the expense of a certain isolation from the currents of our national life. The most representative institutions must be those which, like Harvard, Yale, or Princeton, have developed in close sympathy with the fortunes of the nation, and which, in response to its demands, have passed from the college state into the larger sphere of the university. Princeton, as an institution of this type, finds herself the bearer of a twofold responsibility. She must conserve the interests of the college and of the collegiate type of education, while seeking to further the work of the university. And this dual responsibility brings her face to face with the question, how the general culture demanded by the college shall be maintained in connection with the necessary freedom and specialization of the university. The aims of the college are a broad and liberal culture, mental discipline, the training of faculty; those of the university are the increase of knowledge by specialized research and study, the conservation of knowledge, and, as a secondary aim, its diffusion among the people. Now, Princeton feels the necessity of conserving both these sets of aims. She is not willing to sacrifice either the college to the university or the university to the college. She is not, therefore, in sympathy with that "unchartered

freedom" which some would accord to the youth on the threshold of his college life, believing that the average graduate of a fitting school is not in possession of all the wisdom of the ages, but that, in the first stages of his college education, at least, he stands in need of the experience and guidance of those who are older and wiser than himself. To secure this oversight and guidance he is introduced to a schedule of required studies, embracing, as the essentials of a liberal education, those subjects which have borne the test of the best educational experience. This schedule is included, however, in a broader scheme, which provides a constantly enlarging scope for elective freedom. A principle of specialization is thus planted in the very heart of the college, and the undergraduate is led by a regular advance to the threshold of the freer life which awaits him in the graduate stage of the university.

Another article of Princeton's faith arises out of the relation of the university to the humanistic studies. She has no quarrel with the modern spirit. The university's plant, as well as its scheme of studies, rests on a dual basis of nature and man. The college includes the two co-ordinate types of humanistic and nature study, with the appropriate degrees to which they lead, while the university makes even more liberal provision for the study of nature than it does for the study of man. The article of faith in question arises rather in view of the demand made by some of the votaries of science that the humanistic studies themselves shall be revolutionized; that, in short, Greek and Latin shall be cast down from the central place they have hitherto occupied, and that modern tongues shall take their place. Now, be it understood that no criticism is here intended on the establishment of courses in which the modern languages are central, and the recognition of these by appropriate degrees. Nor is the culture-value of these tongues decried. The point of the controversy here is rather the proposed exclusion of Greek and Latin as necessary conditions of the arts degrees. It is not my purpose here to enter the field of the interminable dispute between classicist and anti-classicist, but rather to express in a sentence or two the reasons for Princeton's adherence to traditional grounds on this question. She believes in the retention of Greek and Latin in their central place in the humanistic studies, and as indispensable conditions of the arts degrees, because of their disciplinary value as instruments of culture, because of their historical value as imbuing the mind of the present with the finest distillation of the spirit of the past, and, lastly, because of their essential spiritual value as stimulants of the moral and intellectual energies of the soul. This last reason bears with especial force on the retention of Greek, for it was surely no historic accident that the intellectual decline of the West was coincident with the loss of the Greek culture, or that the later centuries found it worth while to endure the throes of two

periods of renascence in the thirteenth and fifteenth centuries in order to regain what had been lost. Princeton shares with the most intelligent advocates of the classics the fear that the omission of Greek from the requirements of a liberal humanistic education will lead to its dropping out of our educational economy altogether, and that its loss will be an evil of such magnitude as only another renascence of the human spirit would be able to cure.

A third article of faith arises in view of the relations that ought to subsist between culture and religion. Setting aside the questions of denominational and ecclesiastical control as irrelevant to the real issue, and conceding the impracticability of sectarian instruction for the majority of institutions, the question still presses: What attitude are our colleges and universities going to take toward the religious life of the nation? Shall they disclaim all responsibility for the relation that is to subsist between religion and culture, as well as for the religious life of their students, or shall they regard as one of the great problems for academic statesmanship the establishment of such a *modus vivendi* between learning and religion as shall bring religion in some way to bear on the daily life of their students? The stand of Princeton on this cardinal question is not doubtful. She would insist that it is incumbent on our academic statesmen to devise such a *modus vivendi*. And on the question of the place the Bible is to hold in such a scheme Princeton is in agreement with those who think that its study and appreciation as literature are not enough, but that it ought to be accorded that higher kind of value which arises out of its function as an awakener of moral and spiritual energy, as well as out of the relation it bears to our civilization as the magna charta of its religious life. Friends of their kind, who care for the things of the spirit as well as for the things of the mind, may well deprecate any movement that would result in side-tracking the Bible, as fostering a hurtful breach between religion and culture, and as tending, in the end, to cut the race off from the most vital spring of its spiritual life and inspiration.

That the unity of knowledge shall not be sacrificed in the interests of differentiation and specialization; that the humanities shall not be robbed of the spiritual light and inspiration of the classic past; that the pursuit of knowledge for its own sake shall not be held to imply that a culture that has been vitalized by religion is not the best thing for man — these are cardinal points in the educational creed of Princeton.

On the question as to what the educational policy of the university shall be in the future there is some room for speculation. Princeton stands, in a sense, at the dividing of the ways, where the statesmanship of her rulers is likely to be put to a severe test. Shall the main energies and resources of the university be devoted to the organization and development of its graduate departments, not neglecting, of course, the collegiate work; or

shall they be absorbed in the building-up of professional schools? Now, while there may be a kind of fascination in the idea of a great professional school, say of jurisprudence, like Bologna in the Middle Ages, and while the conservation of both ends would, no doubt, be desirable, if it were practicable, yet my own opinion is that Princeton will be moving in the line of her best traditions, as well as her largest opportunities, if she devotes her main energies to the fostering of her graduate activities.

I hardly need to say that my sketch of Princeton has been touched somewhat in ideal lines. The actual achievements of the university do not satisfy its most optimistic friends. The Princeton we love is partly a dream of the future. The most obtrusive features of the present are unsatisfied wants, which persist in developing faster than available resources to meet them. But if, as has been wittily said, the normal condition of a healthy institution is that of clamorous beggary, Princeton can certainly show the best certificates of health. For her present achievements are as nothing to her hopes for the future. She needs more teachers, more books, larger facilities for study and research. She needs endowed scholarships, fellowships, and professorships. She needs a better organization of her departments. But through the very number and urgency of her wants she is stimulated to activity and to the hope of compassing the means of realizing her ends. And in this faith she does not shrink from her part in the great work to which our universities are called.

There remains a topic on which I cannot resist the temptation of a word in conclusion. The question is under debate as to whether our higher institutions of learning are educating our people in the highest and best sense of the term, and the charge is being made in the public prints that the practical is in danger of being sacrificed to ideals that are not in touch with the real wants of the present. Now, I do not mean to depreciate the function of criticism. Colleges and universities can lay no claim to infallibility. And it is a cardinal necessity that they should be alive with the life of the age, and that they should respond organically to the demands of the present day. It is their manifest duty to keep in touch with the popular currents, and to meet as effectively as possible the practical requirements of the time for training and knowledge. But is there not danger that the critics may be asking us to be too narrowly practical? It is important, of course, that the young man should not be ignorant of the best method of choosing a wife or buying a farm; that the young woman should make no mistake in selecting the materials for a gown, or the cook in giving the last turn to a roast of beef. But life itself is a great training school, and some things must be left to its extra-university departments. There is danger that, in the desire to be too narrowly practical, our institutions will be smitten with blindness to the higher essentials of their duty. They must respond in a large way to the practical demands of the

time. They must attend to the extension and conservation of knowledge in all its departments. They must supply the professions and the public service with highly trained and competent men and women. They must contribute trained minds to the work of producing and distributing wealth. And they must bear in mind that in a democracy the proposition to lower the level of our culture cannot be entertained; the humblest citizen has a right to the highest and best we can give him. Again, our schools and universities should be broadly practical in qualifying their students to respond wisely and effectively to all the great relationships of life, in fitting them to perform their individual, social, and civic duties; to take their part in the institutional life of the nation—the family, the church, and the state; to discharge well their duties to God and humanity.

But there is a still higher sense in which, I think, our great universities, at least, should strive to be practical. The aim of education should be to develop something more than a mere mouthpiece of the time. The individual can realize the highest results of culture only through the function of self-criticism. The same is true of an age or people. The nation establishes for itself these centers of self-criticism in its higher schools and universities, whose business it is to conserve the whole results of experience, and, by reflection in its light, to bring to bear on the present the cathartic of a healthy criticism, in order that it may be purged from its evil extreme tendencies, and its energies be directed into productive channels. And, if in the discharge of this function, the university should find itself at times called to stem the tide of popular opinion, let it not be disheartened: The student of history knows that universities planted in the midst of despotisms, which foster stagnation, are wont to become centers of sedition and revolution, whereas in a democracy, where change is constantly outrunning progress, they may often be called on to do the work of conservation in opposing, or at least moderating, extreme, or revolutionary, tendencies. From this office they must not shrink, if they would be practical in the highest sense. Not blindly to follow, but intelligently to lead, should be their ambition. Only so will they be able to fulfill their true end, and render the highest service to their time and nation.

THE STATE UNIVERSITY.

BY PRESIDENT JAMES H. BAKER, UNIVERSITY OF COLORADO.

HISTORICAL.

To an extent a university must represent the philosophy of a people at a given epoch, and its political, social, and industrial tendencies. It

symbolizes the stage of civilization and spiritual insight. The ethical need of the time led to the study of philosophy in Greece; the innate regard of the Roman people for justice and the problems attending the development of the empire emphasized the study of law in Rome; Christianity and the influence of the Greek philosophy made theology the ideal of the Middle Ages; the development of the inductive method places emphasis on physical science today; the industrial spirit of America gives a practical turn to our higher education. It is no mere accident that the English university is conservative and aristocratic, and aims at general culture; that the French faculties are practical, or that the German universities are scientific and democratic. The differences in spirit and method are determined by factors that belong to the history and character of the different peoples.

The colleges of New England were founded on the traditions of Oxford and Cambridge, and embodied their Platonic and theological aims and conservative method, although they naturally were more liberal and democratic than the parent institutions. The history of the early American colleges has been varied, but the more successful ones have certainly become catholic and progressive. As the country grew and men pushed westward, leaving tradition behind and developing more freely the spirit of our advancing civilization, the conception of a university in touch with all the people, and scientific, and free, arose. Thus we have the state university. At the same time the leading religious denominations have vied with each other in founding in the new states colleges or universities that are more or less denominational in spirit and aim.

The American university of today contains many elements. Broadly speaking, it represents the ideals of the Platonic philosophy—the direct inheritance from England, the character of the German university—the modern scientific method, and the practical demands of American civilization. All these elements are woven into the web of our national life. There is, of course, much diversity. Each class of universities contains something of all the ideals, but each emphasizes certain ones. The older and larger denominational school is more nearly the direct representative of English education, but has made a great advance. The state universities represent the people as such and the tendencies of our civilization, but in accord with the highest ideals. They more readily accept the influence of the German university. The denominational colleges scattered throughout the West aim to perpetuate the denominational idea.

THE STATE UNIVERSITY.

Almost from the foundation of our government free elementary schools have been regarded as an essential and characteristic part of our American institutions. They became a logical necessity when our forefathers

adjudged the caste and intolerance of the Old World, and with prophetic insight proclaimed the era of a new civilization in which the welfare of the state should mean the welfare of all the people. While the idea of education at the expense of the state and under its control was early accepted in that part of the country which has gradually influenced the whole nation, we of today have witnessed a part of the struggle to place on a permanent foundation the modern system of high schools. These schools, especially in the West, now have an assured position and command the confidence of the people. The attempt to take the next step and establish state universities was met with doubt and opposition. At a comparatively recent date, however, many state universities have come into prominence, and today they appear in the main to be the coming institutions of university training, from Ohio to Oregon and from Texas to Montana. Here is a development that is marvelous, and we may well examine its significance.

In the first place, the state university is the logical outcome of our democratic ideal that made the public schools a necessity—an outcome which naturally would be first realized in the newer states. As America furnished new and favorable conditions for the development of civilization, freed in part from the traditions of the Old World, so the new states of the West became the field for a still more liberal growth of the tendencies of the age. There is a recognized tendency in our institutions toward a broader community of interests in respect to many things that affect the common welfare, and in no way does this tendency find a grander expression than in the means for elevating the people at the expense of the people to a better citizenship, higher usefulness, and wiser and nobler manhood. The safety of the state depends upon giving the brightest and best of all classes and conditions an opportunity to rise to the surface of affairs.

In Prussia, Switzerland, and Italy a healthy organization of society is held to depend upon public control of both secondary and higher education. England's system of education tends to maintain social distinctions and an intellectual conservatism that are harmful both to the aristocracy and to the common people. Education in Germany shows its superiority in that it reaches a larger number of the poor classes, and develops greater freedom of thought. The public control of education makes it democratic and progressive, and strengthens its influence with the people. It makes the scholar a leader in the line of advance indicated by the ideals of the people. In the American state university men come together as a faculty, bringing with them training and educational ideals gained in the best universities of the world. They place themselves in touch with the public schools, the press, and all the state agencies of influence and control. Knowing the needs and demands of the people;

they take the lead in the line of natural progress. The state university is inseparably linked to the state, and must carry with it the best influences of the state, and thus extend its influence to the whole people.

The greatest denominational schools at first represented homogeneous elements in the national life. Harvard was essentially a state institution. It was founded in "accord with the fundamental principles of the commonwealth of Massachusetts." The people of Massachusetts at that time were largely homogeneous in race, religion, and love of freedom. Yale was founded partly on the conservative Congregationalism of Connecticut; hence it represented the mass of people in that state. Princeton was founded in the interest of the Scotch and Scotch-Irish political and religious views in the middle states, but was so far catholic as to enlist the sympathy of the Dutch and the Quakers. However, it served a comparatively homogeneous people. In later years each of these universities, in order to reach large numbers of people maintaining diverse views, has been obliged to subordinate specific sectarian or denominational elements and emphasize only the highest ideals common to its constituency. The newer states of the West have a mixed population, with heterogeneous interests. Hence it follows that, not a denominational school, but a state school, broad enough for all the people, alone can satisfy the need of each state. Since it is impossible to maintain a real university for each peculiar interest, all must unite to support one institution, an institution maintaining the highest ideals common to humanity and specifically to our own civilization. The ideals common to the American people are ample enough for an ideal university, founded and maintained by the state. Harvard or Princeton may say, We have done for the state all that the state university claims as its function. Then let each state have a Princeton, which, from the start, is assured of an adequate foundation. In our western states the same reason that would create one denominational college would create in each state fifteen or twenty. The history of the world never has seen such a dissipation of educational energy as is now seen in America, and a system of state education which tends to correct the evil merits enthusiastic support. It may be added that the state university exists in the West because the majority of the people are coming to prefer that kind of institution.

We may say, then, that the state university represents (1) the completion of the democratic ideal of public education; (2) the unity of progress amidst diversity of view, and the mutual influence of the knowledge and power of the scholar and the ideals of the people; (3) the broad platform upon which the heterogeneous elements of the state may unite in the interest of higher education. It is understood, of course, that these three statements are not altogether mutually exclusive.

These views of the *raison d'être* of the state university lead directly to

the presentation in detail of some facts in its history, and some of its aims, showing that its ideals are practicable.

The state university virtually, if not formally, is a part of the public-school system. As such it holds a peculiar and influential relation toward the public high schools. It furnishes teachers trained in the university in regular and pedagogical courses. It scrutinizes the courses of study and the character of the work, and formally approves the schools of standard merit. It helps in every prudent way the influence of the school with the community. By its friendly relation it may present freely the advantages of higher education, and thus reach a large number who would otherwise rest at the goal of high-school graduation. In every state, through the agency of the university, the number of high schools is materially increased, and their standards, plan of organization, and methods are improved. Moreover, it gives the promise of something beyond that stimulates the efforts of pupils in every grade of work.

The connection between the high school and the university still gives rise to troublesome problems, not alone in this country. The ideals of the older American university are often at variance with the systematic development of education below the university and the demands of the people. The state university has come nearer than any other to the solution. While Harvard and Yale met the growing demands of science by establishing separate schools, Michigan introduced the scientific course into the college, making it rank with the classical. This plan, generally adopted by the state universities, places them nearly in line with the natural development of the public-school system. The state universities also show their regard for popular demand by admitting special students.

By offering free tuition, the state university reaches many who would otherwise fail to enjoy higher training. It tends to equalize the conditions for rich and poor in the struggle for the survival of the fittest.

The state university, as it develops and realizes its true function, must be thoroughly catholic in spirit, because it stands for humanity, truth, and progress. Nowhere is the professor or the scholar permitted to use such intellectual freedom as in the state university in Germany, and in the natural course of events the same freedom will be allowed in the United States. Not only will the free and inventive spirit become characteristic, but our western universities, standing in the midst of the most advanced ideas of civilization, must furnish some of the most important contributions to the study of all social, economic, and ethical problems.

In the state universities the mental and moral atmosphere is healthful. A strong, honest manhood is cultivated. There all ideals are strongly

maintained, not according to a particular creed, but with regard to all the implications of man's higher nature. All influences tend to make citizens who are in harmony with the national spirit. An extended acquaintance with graduates of various state universities shows me that, as a whole, they are broad-minded citizens, loyal to the public interest.

The relation of the religious denominations to the state university is one that commands serious attention. The university says to each class of people, Here is an institution which is equally for the advantage of all—it is yours. Its platform, founded on ideals of truth, beauty, and goodness, is as broad as humanity. Since there must be a diversity of religious views, establish your theological schools, halls, guilds, or professorships in the vicinity of the university, and, making use of what the state offers, supplement in your own way the work of the state. The plan is in the highest degree economical; it combines unity of effort with variety of independent view; it makes the general good and the special interest mutually helpful. It is the plan of business common-sense and of wise insight into the problems of the age. That the denominations—granting their point of view—should join their interest with that of the state university is shown also by the fact that often a given denomination finds more of its students there than at its church school.

Many state universities are beginning to receive private endowment. Every consideration of public interest in each state should turn the contributions for education toward the one great center of learning; very few states can support more than one such center. Libraries, art collections, museums, laboratories, buildings, well-endowed chairs, beautiful grounds, should testify to the munificence of private wealth as well as to the benefactions of the state.

Speaking generally, the state universities have large incomes and good facilities. They require high standards for admission and graduation. Wherever feasible, they maintain professional schools, and schools of applied science. They do this upon the theory that the state should both regulate and provide professional education in the interest of proper standards, and that, in the interest of the state and of the individual, such education should be made available to the sons of the poor. Every leading state university is developing a graduate school.

In the matter of electives the state university occupies a middle ground. Yale and Princeton represent the conservative side, and Harvard and Stanford the liberal extreme. An examination of the curricula of ten leading state universities shows that the requirements for admission are definitely prescribed, although two or more courses are recognized; that about half the college studies are required, while the remaining half are offered as groups or free electives. The state universities naturally show a tendency toward the German university system.

SOME UNIVERSITY PROBLEMS.

In America the college has been frankly maintained in accord with Platonic ideals. A full-rounded manhood, drawing its powers from each chief source of knowledge, and prepared in a general way for every practical activity, has been the aim. The American college is dear to the people, and it has done much to make strong men, who have powerfully influenced the nation. There are, however, various tendencies which are likely to modify the whole organization of the American university, including that of the college.

The recent tendency toward free election, reaching even into the high school, is a subject of animated controversy. This tendency I have frequently discussed elsewhere, and I must still maintain that in its extreme form it is irrational. One university of high standing makes it possible to enter its academic department and graduate without mathematics, science, or classics. This is an extreme that is not likely to be sanctioned by the educational world. If there is a human type with characteristics by which it is defined—characteristics which can be developed only by looking toward each field of knowledge—a secondary and higher education which makes possible the entire omission of any important group of subjects is likely to prove a great wrong to the average student. I agree with some recent high educational authorities that no one can be called liberally educated who does not at least possess knowledge of (1) mathematics and science, (2) language and literature, (3) philosophy. Philosophy, as it was in Greece and as it is in Germany, is rapidly becoming a factor in our American education.

There is another tendency which is working toward the inevitable result. The average American student who desires higher or professional education will not spend four years in high school, four years in college, and three or four years in a graduate or professional school. There is a movement to shorten in some manner the whole course of education. Already many colleges and collegiate departments of universities offer electives that will count for one or two years of law, medicine, or theology. Already the university system in the form of group electives is introduced into the last two years of college.

The outcome will probably be a gradual reorganization of the high-school studies and those of the first two or three years of college. The new curriculum should lay for the student a broad and firm foundation in knowledge and power for all subsequent aptitudes. Upon this should be built the graduate school, the professional school, and, perhaps, the school of technology. In this plan the American college need not be lost, for the bachelor's degree could be granted for a given amount of work beyond the college in the graduate school. The claim that the student should

begin university work almost anywhere along the line of education before laying a complete foundation for a specialty appears absurd. It may be added that only by partial reorganization of our educational system can the admission standard to the American professional school ever be made respectable.

The scientific spirit—the term is used in the broadest sense—in all investigation and instruction is a most encouraging feature of present tendencies. If the American professor cannot always be an original investigator, he may keep abreast of investigation and impart its inspiration to the student. To this end the *Lehrfreiheit* (freedom in teaching) is necessary. It is a sad comment that the spirit of the Inquisition has recently appeared in a New England university. The professor's thought must not be prescribed for him by any creed, religious, political, or scientific. Of course, he must stand on the safe foundation of the past; he is not expected to soar in a balloon or leap over a precipice. A recent work on "The Ideal of Universities" says: "We can distinguish four chief currents in the theology of the present era: (1) The Roman Catholic; (2) the Protestant; (3) that objective historic theology which simply states the origin and development of the Christian doctrine; and (4) the inception of a theology based upon recognized facts of science, of human nature, and of history." I believe all philosophy of nature and of human nature must become truth-seeking—indeed, this is a mere truism. No philosophy or belief can afford to maintain any other attitude. Leaders in the orthodox churches are teaching us this fact by their bearing toward new conceptions. And I have no fear of the outcome. The highest ideals and hopes of humanity, I believe, will be confirmed by the most thorough investigation, in which metaphysics shall use the contribution of every department of objective and subjective science. A course in theology, scientific theology, should be a part of every university, including the state university—and some dare to think the latter is the place for it. The facts of man's higher intellectual and emotional life are the most important data for investigation.

The doctrine of *Lernfreiheit*, the freedom of the student, unhappily has been ignorantly applied in this country. It may be properly employed for the German university student at the age of twenty to twenty-five, after his training in the gymnasium, but not to the American college student at the age of eighteen to twenty-two. In America it may apply to the students in the graduate school. Some American colleges have tried the extreme theory of mental and moral freedom for the college student, and have learned from an unsatisfactory experience the lesson of a wise conservatism.

The old struggle between science and the humanities still goes on. We must adopt a view of education which regards the nature of man and

its adaptation to the whole environment, including its historical element. In a keen analysis of the nature of things we shall not find Greek and Latin, but we shall find them historically in our language and literature, and in the generic concepts of our civilization. Hence they are a necessary part of any extended study of language, literature, or art.

I do not believe that the practical tendency of American education will destroy our reverence for what the Germans call the *philosophical faculty* in the university. The liberal arts—I include pure science—are the gems of human culture, and are given a high value even in the imagination of the ignorant. The editor of *The Cosmopolitan* draws a bold and somewhat original outline for modern education, and it is in many ways suggestive. But the author overlooks, what every true scholar knows, that thorough scientific knowledge of principles must remain the fundamental work of education and the substantial ground of progress in civilization. A university course may not consist chiefly of lectures upon prudential maxims, such as all must learn partly from experience. Such a theory would award the palm, not to Socrates, but to the sophists. The truth in all the clamor for practical work in the college is that the culture studies must be vivified by closer relation to the real world and to modern life.

I have said little of what is called the graduate school. Germany credits us with eleven institutions that have either reached the standard of a genuine university or are rapidly approaching it. Of these eleven five are state universities. This estimate, of course, is made in accord with the plan and standard of the German university. It appears certain that in time the name university in America will be applied only to those institutions which maintain the graduate school and raise the dignity of the professional schools. The university system will develop freely in this country only after a somewhat important reorganization of our higher education. The line must be drawn more sharply between foundation education and university work, the whole period of education must be somewhat shortened, and, in all but three or four of our universities, the graduate faculty must be strengthened. That these changes will be wrought, and that we shall have a rapid development of the genuine university, I believe. I believe also that much is to be expected from our higher scholarship in many lines of investigation. In America men are solving problems the existence of which has only been dimly conceived by the masses of people in the Old World. Inspired by our advanced conceptions of government and society, and by the free, inventive, truth-seeking spirit characteristic of our people, the American scholar will make leading contributions to the world's literature of sociology, politics, and science. And when the spirit of reality, now superficial, gains a deeper insight into the nature of things, America may yet lead the world in those investigations which belong to the sphere of philosophy.

UNIVERSITY IDEALS AT STANFORD.

BY PRESIDENT JOSEPH SWAIN, INDIANA UNIVERSITY.

During the busy days before the last college commencement I received a letter from the President of this Council, saying Dr. Jordan had been asked to present a paper at this time on "University Ideals at Stanford." At the last moment Dr. Jordan found he must go to Alaska in the interest of the United States government, to finish his studies concerning the seal problems, the investigation of which he and his assistants, as the agents of our government, had begun last summer. Under these conditions I was asked to present a paper on the topic assigned Dr. Jordan. I replied to President Hinsdale that my duties were so numerous and the time so limited that I could not present an adequate paper, but if he would leave me entirely free to make my talk as short or as rambling as I pleased, I would give a few off-hand impressions, which would furnish a basis for discussion.

As I was for the first two years of its existence connected with Stanford University, I am familiar with the practical workings of that institution. I shall take pleasure in answering, to the best of my knowledge, any question any member of the Council may wish to ask concerning Stanford University.

The ideals at Stanford were in the beginning essentially the same as those of Indiana University. President Jordan and six other professors of the original fifteen members of the faculty were from Indiana. The curriculum, the requirements for degrees, the system of electives, the method of government, the independence of the professors, were all transplanted to the new institution. That it may be clear what the distinctive ideals of Stanford are, I present a comparison of the freedom of the student, as exemplified by the entrance and college requirements, in Indiana and Stanford Universities.

The entrance requirement in Indiana permits a certain amount of election. For example, the science requirement may be satisfied by acceptable work in any science. It may all be in botany, zoölogy, chemistry, or physics, or any other science. The requirements for entrance at Stanford to all courses are the same. Students taking engineering, courses in liberal arts, or law, are all required to have an equivalent amount of training on entrance. In other words, the purpose of the examinations is to test the fitness of the candidate to enter upon college work, and not to test the degree of his competence to meet certain arbitrary or traditional requirements. The standard of admission is kept at the level attained by

the best high and preparatory schools; but the largest liberty of substitution is permitted. Thorough preparation in science, modern languages, literature, or history is given the same value as thorough work in ancient languages or mathematics, while superficial work in any subject or work pursued for less than one year is rejected. According to the Stanford catalogue of 1896-97, for meeting the entrance requirements of the university candidates are offered a choice of twelve out of twenty-two subjects. These subjects are all reduced to a unit of a high-school year, making twenty-eight credits, and placed on an exact equality, except the Subject I. (English), which is required of all applicants. Twelve credits are necessary to full standing, and these may be made up of English (two credits) and such other subjects (aggregating ten credits) as may be selected by the candidate. The twenty-two subjects are: English, elementary algebra, plane geometry, solid geometry, trigonometry, advanced algebra, physics, chemistry, physiology, botany, zoölogy, drawing, American history, English history, Grecian and Roman history, English literature, Spanish, French, German, elementary Latin, advanced Latin, and Greek. The regular student in Indiana is required to take in the university English, mathematics, science for one year daily, language for two years daily, and, in addition to this work, must take at least three years daily in some one department as his major subject. The rest of his work is elective. This requirement, while not giving the student absolute freedom of choice, does give him a very considerable opportunity to follow his own bent and the advice of the head of the department in his major subject.

There are only two departments in which every candidate for a degree must take work, namely, English and mathematics. A student must take work in science for one year, two terms of which must be laboratory work. It is claimed that the educated man of the present day should at least know something of the spirit and method of modern science, on which so much of the advancement of the modern world depends. This science requirement is designed to meet this university ideal. For this purpose it is not necessary to prescribe botany, or zoölogy, or chemistry, or physics, or geology, or physiological psychology, or any particular branch of science, but that the method and spirit of the work can be obtained in any one; hence the science requirement is as above stated. In language the requirement is not in Latin, Greek, French, German, Spanish, or Italian, but two years of language in college in any of those mentioned. The requirement is based on the theory that no matter whether these languages are of equal importance or not, the results to the student are best within these languages when the student is permitted to take the one which fits his case best. The major subject of the student is only limited by the number of the departments, and there are certain opportunities for choice within these departments.

Scarcely any two students whose major subject is history, for example, are pursuing for the four years the same courses in history. In addition to the freedom of choice mentioned above, the student has three or four years in one subject daily in which he has absolute freedom to select. He does, however, in most cases advise with the head of the department in his major subject.

This course of study has been very closely adhered to for twelve years. With young students, whose course of instruction has been continuous from the grades through the high school and the university, it has been strictly adhered to. In the case of mature students, such as teachers from twenty-five to forty years of age, of whom there are an increasing number, one year of other work is frequently substituted for one year of required work.

The system is designed to secure a fundamental uniformity, and at the same time to be flexible and adaptable to the needs of individual students. All courses demand an equal amount of preparation for admission. All must include a group of similar required studies. All oblige the student to follow some special line of study during three or four years, and all lead to the degree of bachelor of arts. But, at the same time, the student is granted great freedom in the selection of studies, the educational value of the element of personal choice being fully recognized.

In the catalogue of Indiana University of 1888-89 the following statements of principles are made:

"In the arrangement of the courses of study several principles have been recognized. The beginnings of any study are easy compared with the difficulties the student meets after going beyond the mere elements of his subject; hence a better mental training can be obtained from the continued study of one subject during several years than from the study of various subjects for a short period each. The thorough study of any subject is conducive to good mental discipline; therefore all the departments should be placed on the same footing. Moreover, as no two minds are alike, and as different minds require different discipline, the student should be granted great freedom in the choice of studies, after the completion of certain subjects, necessary to all culture, and the continued study of a specialty, necessary to efficient mental discipline. The educational value of the element of personal choice, on the part of the student, is also fully recognized. One of the most important functions of the school is to place the individual on his feet, to give him the ability of self-direction. To this end no method is more effective than a well-guarded elective system." The degree of bachelor of arts at Stanford is granted on the completion of a four-years' course, of three subjects per day, provided the major and minor subjects are satisfied. "Each student selects as his major subject the work of some one professor. His professor has the authority to require the completion of the major subject, and also

such minor subjects in other departments as he may consider necessary or desirable collateral work. Such major and minor requirements, taken together, will not exceed forty hours of university work, or one-third of the student's time for the four years of undergraduate work."

With these exceptions, the student is absolutely free to choose such subjects as he may think best, subject to the conditions that he must satisfy his teachers that he is ready to profitably pursue the subjects of his choice.

"In the arrangement of the courses of study," says President Jordan, "two ideas are prominent: first, that every student who shall complete a course in the university must be thoroughly trained in some line of work. His education must have as its central axis an accurate and full knowledge of something. The second is that the degree to be received is wholly a subordinate matter, and that no student should be compelled to turn out of his way in order to secure it. In other words, no work in itself unprofitable to the individual should be required of him in order that he may secure a degree. This leads naturally to the discarding of the conventional college curriculum; for any curriculum that can be made up is calculated for the average student; and every college curriculum implies a large amount of waste, either through taking unprofitable subjects which are undesirable for the culture of the individual student, or else through taking desirable subjects under unsatisfactory teachers.

"This arrangement has an advantage over the elective system pure and simple, requiring of every student such a degree of thoroughness in some one line that he becomes in some degree an authority in that direction. He has by this special work a base line by which he is able to measure the attainments of others and his own attainments in other directions. By making the professor in charge of the major subject the official adviser of the student, the latter is enabled to secure the help which experience should give, and it is found, as a matter of fact, that the course of study selected by students for themselves, the power of responsibility of self-direction being in their own hands, is better capable of defense than any prescribed curriculum which could be placed before such a student. The element of consent on the part of the student is regarded as of as high importance in the development of scholarship as that of self-direction is in the formation of character. It is better for the student that he should sometimes make mistakes than that throughout his course he should be arbitrarily directed by others. Each one of the different departments in the university has, therefore, its own course, so far as major subjects are concerned, and the minor subjects required by each student are not arbitrarily joined to the major subject, but can be varied indefinitely as the needs of the student demand.

"In order that all courses and all departments may be placed on exactly the same level, the degree of bachelor of arts is given in all alike for the equivalent of the four-years' course. Should the major subject, for instance, be Greek, then the title given is that of bachelor of arts in Greek; should the major subject be chemistry, bachelor of arts in chemistry, and so on.

"It is the purpose of the university to treat all departments alike, to furnish the best instruction and best appliances available for work in all, and to leave all question of the relative value of studies to the student himself and to the adviser whom he has chosen."

A careful study was made of the system of election in Indiana by Dr. Boonè, in 1892, and published in the *Educational Review*. This study should be extended to the present time, but I quote his conclusion, with the results then available:

"The following propositions are submitted as inferences fairly borne out by the investigation:

"(1) The principle whose policy is here discussed, and which has been followed for eight years, has improved the student body, by relating the culturing process to a well-defined and interested motive.

"(2) By so much it has improved teaching, through the attractive force of interested learners.

"(3) It has rationalized department, in that it has dignified the motives of students.

"(4) It has discovered unexpected ability among students, furnishing, at the same time, opportunity for its encouragement.

"(5) There is an obvious tendency toward the obliteration of class distinctions and their accompanying antagonisms."

So far as the ideals of Stanford University are shown in their requirements for entrance and graduation, it is only in the extension of the elective system that it differs from Indiana.

The university exists for the good of the students, and, therefore, every sort of personal helpfulness is part of the university's duty. A student should not be forced to do what is not best for him, either for entrance, continuance, or graduation. He is taking his own course, not one prearranged for someone else. With this view of the duty of the university the teacher must know the student. He must live with him. He must occasionally have him at his home, be with him in his leisure hours. He must be an older brother, who has gone a little farther on the road to learning, and is in the university to give the benefit of his experience to those who are younger and have not traveled so far on the journey.

The government of students in Indiana and Stanford Universities has been reduced to a minimum. There are no rules and regulations. No

mention of government is made in the college catalogue. It is understood that students are expected to act in accordance with the regulation of the best society; that, being gentlemen and ladies, they are expected to act as such; that students are amenable to the laws of the state, and have no privileges which the best citizens should not claim for themselves. It is as much the duty of the student as of the professor to see that no one shall do aught to bring the university into discredit.

The best way to keep students out of evil paths is to give them something to do and interest them in it. The elective system is helpful to this end. There are but two worthy objects in college discipline: the promotion of the welfare of the institution, and the welfare of the student.

The university has moral duties. It can inculcate genuineness by being genuine, unselfishness by devotion to truth and to the helping of others. "The teacher," says Dr. Bryan, "is one of the accredited delegates of civilization." In Heine's phrase he is a "knight of the Holy Ghost." If virtue and integrity are to be propagated, they must be propagated by people who possess them. If this child world about us that we know and love is to grow up into righteous manhood and womanhood, it must have a chance to see how righteousness looks when it is lived. That this may be so, what task have we but to garrison our state with men and women? If we can do that, if we can have in every square mile of our country a man or woman whose total influence is a civilizing power, we shall get from our educational system all it can give and all that we can desire.

The value of thoroughness in something as the basis of a useful life is not to be overestimated. In the present day, when research is the password among all scholars, the value of thoroughness to scholars needs no comment. The great virtue of the old classical course, consisting of Greek, Latin, and mathematics, for those whose natural food was these subjects, was the fact that the course was continuous, each lesson had to be learned before the next could be taken, and required thoroughness to properly pursue it. Thoroughness became a habit. One of the virtues of the system pursued both at Indiana and Stanford is that all students, whatever their natural bent, must be thorough in at least one line, namely, their major subject.

The object of Stanford University, as stated in its charter, is "to qualify students for personal success and direct usefulness in life," and its purpose "to promote the public welfare by exercising an influence in behalf of humanity and civilization, teaching the blessings of liberty, regulated by law, and inculcating love and reverence for the great principles of government as derived from the inalienable right of man to life liberty, and the pursuit of happiness."

Senator Stanford had the notion that training our young men in college should in some way be such that the power gained should at once, on leaving college, be more effective in the affairs of this life. He had come to the view through contact with a large number of college graduates from the East, recommended to him by his eastern friends. He found it the rule, he said, that these men had been trained away from the affairs of this life instead of trained for it. It was a matter of deep concern with Senator Stanford that the work of the university should fit students for direct usefulness in life.

The ideas of individual development, of simple genuineness, of thoroughness, of enthusiasm, of self-devotion, and of self-restraint, are not peculiar to Stanford, but they have been emphasized there in greater degree than has been done in some institutions.

The freedom of the teacher to use his own judgment in what he teaches, within the limit of the subjects he is employed to teach, and his own methods of instruction, is unquestioned. He is held responsible for results.

The modern university is an institution where all subjects are considered of equal value, and the great ambition of the teacher of each subject is that he himself shall first gain a complete mastery of his subject, and that he shall be able to assist his students to such mastery; and, in the second place, shall be able to contribute something to the sum total of human knowledge in his own line of work. The university does not do its duty to the state if it does not, in some degree, at least, widen the field of human knowledge. It is chiefly through the discoveries and contributions of original workers that those facts and principles are discovered through which the state seeks a more advanced stage of civilization and culture.

After all, university ideals amount to little if these are not embodied in the teacher. I close this paper with a quotation from Dr. Jordan, who I wish might have been with us today to present this theme.

"If our work is successful, our ideals will appear in the daily life of the school. In a school, as in a fortress, it is not the form of the building, but the strength of the materials, which determines its effectiveness. With a garrison of hearts of oak, it may not matter even whether there be a fortress. Whatever its form, or its organization, or its pretensions, the character of the university is fixed by the men who teach. 'Have a university in shanties, nay in tents,' Cardinal Newman has said, 'but have great teachers in it.' The university spirit flows out from these teachers, and its organization serves mainly to bring them together. 'Colleges can only serve us,' says Emerson, 'when their aim is not to drill, but to create; when they gather from far every ray of various genius to their hospitable halls, and by their concentrated fires set the heart of

their youth in flame.' Strong men make universities strong. A great man never fails to leave a great mark on every youth with whom he comes in contact. Too much emphasis cannot be laid on this: that the real purpose of the university organization is to produce a university atmosphere, such an atmosphere as gathered itself around Arnold at Rugby, around Döllinger at Munich, around Linnæus at Upsala, around Werner at Friedburg, around Agassiz at Cambridge, around Mark Hopkins at Williamstown, around White at Ithaca, around all great teachers everywhere.

"The university should be the great refuge hut on the ultimate boundaries of knowledge, from which daily and weekly adventurous bands set out on voyages of discovery. It should be the Upernavik from which polar travelers draw their supplies, and, as the shoreless sea of the unknown meets on every side, the same house of refuge and supply will serve for a thousand different exploring parties, moving out in every direction into the infinite ocean. This is the university ideal of the future."

ELECTION IN GENERAL EDUCATION.

BY EMERSON E. WHITE, COLUMBUS, O.

Several conflicting theories are earnestly contending for the control of American education. The most confident of these is the industrial theory — a phase of utilitarianism. It asks of every school study, "Of what practical use will its facts be in the shop or in the store, on the farm or in the factory, in managing a railway or a bank?" It asserts that the supreme and ultimate test of the worth of knowledge is its practical utility for the purposes of guidance in life's business and toil. If a fact cannot be used in the work of life, it is declared to be a useless fact, and "its acquisition a positive waste of time and effort." "Light! Yes, we do want light," says Mr. Froude, "but it must be light which will help us work, and find food and clothing and lodging for ourselves. No education which does not make this its first aim is worth anything at all." Man's labor is thus made the supreme good, and the prime test of the worth of knowledge is the utility of its facts in the industries of life.

The wide acceptance of this theory is an indication that not a few minds are dazzled, if not dazed, by the brilliancy of our material civilization. The marvelous progress in the past fifty years in discovery and invention, and the consequent multiplication of the forms and applications of human skill and industry, are, indeed, bewildering. The material products of these various forms of effort are also so tangible, so sensuous,

so impressive, that they assume the importance of the very ends of human existence.

Under this dazzling influence of material forces and enterprises man's chief end seems to be to till the soil, invent machinery, manufacture material products, and build and run railroads and steamships. The suspicion grows that man's supreme mission in the present life is to fit up the world for some coming race of beings worthy of its material ministry. We are told that the Garden of Eden was created for the abode of our first parents ; but this new philosophy of life assumes that Adam and Eve were created for the garden, and especially to till and dress it.

Another of these aggressive theories may be called socialism in education. It assumes that the practical end of education is to fit man to be a helpful factor in a social organism—to co-operate with his fellows in securing social well-being and progress. It sees nothing in the individual that is abiding, much less supreme, except as he is absorbed in the greater and more permanent self called society.

It asserts that what the individual needs is not self-directing power or selfhood, but the power of easy articulation with others ; a lock-step facility in social and civil activities. Education thus becomes a process of fitting youth for social absorption and service ; and the knowledges of supreme worth are the facts of social, or community, life and progress. Organized society thus becomes the lord and master of men, with power to allot their work and mission ; and, as a logical consequence, with the duty of supplying each with food, clothing, and shelter.

Over against this socialistic doctrine, and in sharp contrast with it, is the theory which is known as individualism in education. It assumes that every child is born into the world an individual entity, with little in common with his fellows in capabilities, tastes, and tendencies. It asserts that every child should be studied and educated as an individual being, as a personality, with sharply defined characteristics and needs ; and it, consequently, condemns the attempt to provide a general course of instruction for children and youth as impracticable and undesirable. It clamors for individual instruction and opportunity.

This theory also assumes that the special endowments or aptitudes of youth are so clearly manifest in consciousness that each may be left free, not only to choose his future pursuit, but the preparations and steps that lead to it. This involves individual choice of studies and training from the beginning.

It is further claimed that the aptitudes and possibilities of children may be early discovered by observation, and hence the special studies and training needed by each as a preparation for his special work in life fall within the certainties(?) of the new science called "child study." It is thus proposed to reduce individualism in child education to a scientific basis.

This view of education has recently been advocated under the assumption that all persons are born lop-sided in mental endowment, or, to use the stronger diction of an apostle of the new philosophy, all children are born "long" in some powers and "short" in others. One child, for example, is born short in mathematics, another in language, another in music, another in drawing, etc. It thus becomes the province of the teacher to discover in what powers his pupils are born "long," and then afford these powers the opportunity to grow longer, thus co-operating with nature and moving in harmony with her "divine ordinations."

This "long-and-short" theory of the mental endowments of youth also applies to their activities and labor. One child is born short in farm work, another in the mechanic arts, another in housekeeping, and so on ; and, since inclination is assumed to be in the direction of natural ability or aptitude, it follows that no youth should be required to do what he does not like to do. If, for example, he does not like farm work, he should be excused from what will be to him drudgery ; and if, perchance, a youth is born short in all work, he should be permitted to honor nature's ordination by being an idler and living off the toil of others. In the light of this philosophy the professional tramp may be defined as a man born short, except in stomach and legs.

Closely related to this theory of individualism are phases of the doctrine of interest, the term being loosely used to cover, not only interest proper, but tastes, inclinations, affections, desires, etc. This doctrine assumes that the interests of a child indicate his special endowment or natural aptitude, and hence, in following the child's interests education is moving in the direction of least resistance, and thus makes the most rapid progress. It is even claimed that interest may be accepted as a sure and safe guide, not only in education, but in industrial pursuits, and it is confidently urged that it is the duty of the teacher to discover the pupil's interests and follow them, not only in the selection of studies, but also in methods of instruction. It is assumed, somewhat in the face of experience, that teachers have the insight and wisdom necessary for such a task.

Other advocates of the doctrine of interest recognize the fact that the present interests of pupils are not always in harmony with their best endowments, and so the problem in their education is the establishment of new interests that are in harmony with such endowments. This view makes education largely the process of awakening and confirming proper interests in pupils, interest thus becoming an end of education.

Both of these views overlook the fundamental fact that interest is at best only a condition or concomitant in education—never a cause or end. It is true that interest is "the mother of attention," that it leads the way in man's best efforts ; and so is a necessary condition in all successful

learning. Experience attests the statement that the awakening of the pupil's interest is essential to success in teaching. It is thus seen that interest is a principle of great importance in pedagogy; and it is well that this principle has lately received new attention and emphasis.

But the assumption that interest is a safe guide in education is sadly jostled by the well-known fact that human interest is subject to very sudden and radical changes. A new interest is often born of some deep experience in a day, and new interests are constantly supplanting earlier ones. As we climb the ladder of human experience, we are constantly leaving the successive rounds of interest behind us. We do not carry these rounds with us.

It is also to be noted that new interests are awakened by new knowledge. There may be a subjective aptitude and condition, but there must also be an external excitant. Interest in a new style of hat is excited by seeing it, and we are assured that absorbing interest in a bicycle can only be realized by riding it. We suspect that this principle explains several things in this modern art; as, for example, the apparent indifference of a lady to on-lookers when she is riding a wheel.

THESE THEORIES REVIEWED.

These several theories of human nature hold each a large element of truth, but the difficulty arises when any one of them is put forward as the whole truth, or even as the basis of the whole truth. A complete human life is a very complex thing, even if we accept Herbert Spencer's analysis as comprehensive. The ends of such a life, according to Mr. Spencer, are (1) direct self-preservation, the preservation of life and health; (2) indirect self-preservation, or self-maintenance; (3) parenthood, or the rearing of offspring; (4) citizenship, including the social and civil functions; and (5) rational enjoyment, enriched by culture, which Mr. Spencer belittles as "the refinements of life." The attainment of even these ends of complete living involves, not only endowments of a high order, but wise and wide preparation. Moreover, they are attained, if attained, under the demands and limitations of civilization, to say nothing of the conditions and laws of an all-controlling divine moral government.

It is obvious that an education that prepares man to fulfill these ends of human existence must deal primarily with common endowments and common interests. It is true that each individual of the race is born with individual characteristics, but the deeper and more vital fact is that all men are born with common powers and needs. It is this common, or type, endowment, facing, as it does, common, or type, ends, that makes the school and the college possible and necessary. Special aptitudes are the variations of the individual from the type, but the type remains and is the dominant factor in the education of youth.

There must be, it is true, a wise recognition of the individual variations, but the common powers and needs must not be sacrificed. Preparation for complete living, even in the five directions specified by Mr. Spencer, involves the efficient training of type or race powers, and this training must be aided by "organized knowledge"—*i. e.*, knowledge properly arranged and correlated.

There is no problem of human life more interesting than the adjustments of the special endowments of individuals to the conditions and demands of civilized life. The industries and arts that minister to self-preservation, self-maintenance, parenthood, and citizenship lie at the basis of civilization, and are properly considered as fundamental activities. The normal child is born with capabilities needed for the mastery of these activities. Wide experiments show that children, as a class, can learn the primary arts of reading, language, number, writing, drawing, and singing. Very few children are born "short" in any one of these fundamental school arts. They involve the common endowments of the race for great common ends.

But each of these arts has a higher, or true art, phase, and its attainment requires special endowments, which in a degree are exceptional, not universal. Hence few persons, comparatively, are born with aptitudes that make it possible for them to be great artists, whether in oratory, literature, music, painting, or sculpture; and for the reason that the highest civilization demands but comparatively few great artists—a reason that touches the deep principle of design in human life, a principle which has been strangely overlooked.

This principle is strikingly obvious in those industries that minister directly to self-preservation and self-maintenance. All men are born with capabilities for the simple industrial activities that supply food, clothing, and shelter, while but few men, comparatively, have those special endowments which are requisite for high inventive skill or large executive efficiency. In a sentence, there seems to be a marvelous adaptation of individual capabilities to the demands and needs of civilization—a divine economy, if I may so speak, in the distribution of human endowments.

It would, however, be a serious mistake to infer from these facts that the common endowments of the race are low and rudimentary in possible activity, or to assert, with Carlyle, that "the mass of mankind are born putty-headed." In a low civilization the great majority of the race seem to be born "hewers of wood and drawers of water," but universal enlightenment and wider opportunities find man's natural endowment equal to the new demands. The marked triumphs of popular education have been in the direction of industrial power and skill, as well as in moral and social elevation. It has put intelligence at the loom and the spinning wheel,

and made the brain of labor stronger than its muscles. It is, indeed, a long road from low barbarism to high civilization, but the human race is capable of making the ascent.

RESULTS OF CONFLICT BETWEEN THESE THEORIES.

The conflict between these theories of human life for supremacy in the American school and college has brought the traditional methods of education into the very throes of revolution. This conflict is thickest around the question of a true course of study. For years past there has been an increasing recognition of the importance of several courses of study in the college, and also in the high school, each looking to some great interest, or department of industry or life. Hitherto these several courses have contained in common at least the elements of all fundamental studies and arts, and their differentiations have been in the higher phases of these studies or in branches less fundamental.

But individualism demands something more radical than several courses of study, each leading to an appropriate degree. It urges that the student should have a choice, not between courses, but between studies, thus determining his own course, if course it be, from first to last.

In an address at John Hopkins University a few years since the president of one of our leading universities advocated the scheme that a university should provide instruction in some eight or nine great lines of knowledge, and that students should be permitted to select any three of these and, on completing the studies selected in a satisfactory manner, be graduated. This scheme was presented in the interest of what the distinguished speaker was pleased to call a "broad education." It struck me at the time as a broad scheme for permitting students so choosing to obtain a narrow education under the cover of a deceptive degree. It is not the breadth of the university scheme on paper, but the studies actually mastered by students, that determine the breadth of their training and attainments.

This scheme for "broad education" is akin to the assumption that a well-equipped college gymnasium, in which a score or two of students are trained to be athletes, will, in some vicarious manner, impart physical development to the hundreds of students who have no systematic physical training. It is also a close cousin to the assumption that lends a supposed special virtue to the provision made for manual training in some of our cities—this provision being limited to a separate manual training school of high-school grade, in which less than one pupil in twenty in the schools takes shop exercises, called "work," for two hours a day for a few months. It seems to be assumed that this limited recognition of the value of manual training will somehow inspire all the youth of the city with desired respect for hand labor, and that, by a common

impulse, they will at last rush from the schools into the workshop and the kitchen. The value of physical and manual training is largely limited to the students, few or many, who take the training. Nothing is gained in education by over-claims and pretention.

ENDS OF HUMAN EXISTENCE.

It seems unnecessary in this presence to enter into a formal discussion of the ends of human existence in order to show that no one of the theories now considered affords an adequate basis for a system of general education—*i. e.*, an education that seeks to give the student a general preparation for complete and successful living; an education that involves at least five fundamental studies and disciplines, both in their elementary and higher phases.

Mr. Spencer seems to overlook the fact that the preservation of man's physical nature is but the condition of a higher good. The body exists for the soul that inhabits and glorifies it. Physical health, comfort, and perfection are but means to a higher end—that end the nurture and perfection of man's physical nature. What is the worth of this physical temple when reason chatters at its portals, or idiocy stares through its windows? The soul is the supreme human fact, and the perfection of the soul is man's supreme personal interest and duty.

Nor is this subordination of man's two natures, the physical to the spiritual, changed if we make earthly happiness the supreme end of life. Here we shall find that the highest enjoyments flow from the perfection and use of man's highest powers. The sensualist, the glutton, and the savage are not the best types of human happiness. The exalted delights of the intellect, the exquisite joys of æsthetic taste, the sacred raptures of moral beauty and Christian faith, far exceed the epicurean pleasures of appetite and sense.

Moreover, the culture and perfection of man's spiritual nature multiply and ennoble the sources of physical enjoyment. The nearer a man comes down to the brute, the fewer and the coarser are his physical wants; and, on the contrary, the higher his elevation above the mere animal, the more exalted are his desires, and the richer and nobler his enjoyments.

THIS LAW OF SUBORDINATION UNIVERSAL.

The same law of subordination that rules in man's nature pervades all human activities and interests. As a man's chief personal duty is the perfection of his higher nature, so the highest parental duty is the development and culture of his child's spiritual nature. The body of the child is, indeed, to be wisely cared for, its health and vigor faithfully preserved; but there is something in that unfolding life dearer to the parents' heart than physical perfection and well-being. In every smile

of joy, in every gleam of dawning intelligence, is seen the indwelling worth, the object of supremest care and solicitude—the God-imaged soul.

A like subordination is seen in man's relation to material civilization. The great enterprises that tax and honor human skill and industry, the humming manufactories, the winged and steam-pulsed commerce, the iron highways that belt the continents, the lightning's nerves stretched through the ocean's depths and pulsating with the world's passing history—these all are but agencies to minister to man's needs and well-being. Their glory and their value are alike the reflex of the soul's worth. Let intellectual and moral civilization be turned back towards paganism, and how quickly the tide of material progress recedes! The supreme human need is a higher, broader, richer, and truer manhood.

The same law of subordination pervades man's civil and political duties. An important function of government is the protection of life and property, and for the reason that these are necessary to the higher ends of human existence. Likewise material advancement and physical comforts and easements are important elements of national prosperity, and as such demand the attention of government. But these are not the highest ends of government. The vital elements of national life are liberty, justice, truth, honor, virtue, righteousness, dwelling regally in human hearts and life; and when these cease to vitalize and ennoble a nation's material civilization, its bloom and fruitage perish. Constitutions and laws, executives and courts, commerce and art, churches and schools, are but co-ordinate agencies for the nurture and perfection of man in his complete birthright and destiny.

This view reveals the fatal defect in that philosophy of education which regards man as a grand physical organism, born of physical nature and reaching up to nothing; that makes a complete human life rest upon the broad base of bread-winning activities, and taper upwards through parental, social, and civil duties and interests to mere æsthetic gratification and enjoyment; that makes the material forms and conditions of civilization more important and fundamental than civilization itself. Such a view of life subordinates the soul to the body and reverses the ends of human existence.

A complete life is rather a truncated cone, resting on the smaller base of physical being, and lifting itself by widening sections of nobler activities, until it fills the circle of the soul's highest aspirations and loses itself in the infinite perfections of its Maker. In a true philosophy of life man is broader and higher than his physical conditions and needs.

THIS SUBORDINATION RULES IN EDUCATION.

This law of subordination that rules in man's nature and activities—the physical to the spiritual—indicates, not only the prime functions of

education, but also their true subordination. The first and highest function of school training is the development and culture of all the pupil's powers in due harmony. The second and subordinate function is the imparting of a knowledge of those facts and principles which are practically useful for the purposes of guidance in life. The first is discipline or training; the second knowledge.

In each of these functions the physical is subordinated to the spiritual. The disciplinary function includes (1) the perfection of man's physical powers—the developing, purifying, and beautifying of the soul; and (2) the nurture and perfection of the body. The second function includes (1) the acquisition of knowledge needed for the proper discharge of life's higher duties; and (2) the acquisition of information useful in promoting physical well-being and self-maintenance—that is, “in getting a living.” In the order of time the physical may, especially in early training, take precedence, but in importance and emphasis it is always subordinate to the spiritual.

In determining the value of knowledge for guidance in life, a careful distinction must be made between those empirical facts and details which are best learned by experience, and those general facts and principles that can guide and fructify experience. The knowledge necessary to make a boot or a coat, to shoe a horse or build a house, is to be acquired by learning the art, and the schools cannot be made workshops for this purpose. It may be true, as Froude claims, that “every honest occupation to which a man sets his hand would raise him into a philosopher if he mastered all the knowledge that belongs to his craft,” but this method of making philosophers is not practicable in our schools. A school in which tailors, weavers, carpenters, shoemakers, hostlers, nurses, etc., are each taught the “knowledge” that belongs to his craft would be a curiosity. Such a scheme of general education is utterly Utopian. The fact is, the knowledge directly and specially used in the different trades and pursuits of life can receive but little attention in a course of general education, and for the reason that such knowledge has a special application and is not of general interest and utility.

Moreover, what a man most needs, even for the work of life, is not so much specific knowledge as mental aptitude and power. “Education,” says Mill, “makes a man a more intelligent shoemaker, if that be his occupation, but not by teaching him how to make shoes; it does so by the mental exercise it gives, and the habits it impresses.” The abiding, practical result of school training is power. A knowledge of the facts and principles relating to a given pursuit is very important, but higher than this is that developed strength and ability, that power of discernment and application, which can change the dead facts of knowledge into the living realities of human action. Knowledge may guide and

enlighten, but discipline gives acumen, insight, grasp, inspiration; and these are the lucky winners of success in all the conflicts and emergencies of life. Practical facts, to be of practical utility for guidance, must be applied by an intelligent mind. "With brains, sir," was Mr. Opie's reply to the student who wished to know with what the great artist mixed his paints, and this answer contains the practical philosophy of both art and industry. The prime want in getting a living, which Mr. Froude makes the chief end of life, is brains—a mind keen-sighted and far-sighted, steady in aim and purpose, and full of faith.

The prime question to determine the value of knowledge for guidance is not whether it bears directly upon the labor of the farmer or mechanic as such, but rather, Will it fit him for complete and successful living *as a man*? "Man does not live by bread alone." The artisan must also be the guide of the family, a member of society, a citizen of the state, the subject of divine government; and out of these relations flow duties of the highest importance. Every child born into American citizenship is confronted by the grandest political and social problems in earth's history, demanding a ripeness of judgment, a breadth of information, and a catholicity of spirit. Here the knowledge of most value is that which prepares man to meet the obligations of an exalted, noble manhood. The engineer must be swifter than his engine, the plowman deeper than his furrow, and the merchant longer than his yardstick.

Besides, all experience shows that an education dwarfed to the facts that concern a given occupation defeats itself. Special preparation for given pursuits needs to rest upon a general preparation for all pursuits, and the more comprehensive the general preparation, the more fruitful and useful the special training. This general training is all the more necessary since most occupations, when pursued continuously and intensely, groove the mental activities and result in narrow, lop-sided men.

Moreover, were it desirable to narrow everyone's education to the groove of his future calling, such a system would not be feasible in this country, where the child is not necessarily born into the occupation of his father. Here the different pursuits stand with open doors, and neither the child nor his parents know which he will enter, nor how long he will remain. How few Americans find themselves at forty in those callings which gilded their day-dreams at fifteen! This one fact is sufficient to show the fallacy in deducing the necessity of a system of general industrial education in this country from the educational experience of countries where the occupations of life are inherited and predetermined. The future calling of an American boy does not fall within the certainties of intuition or instinct, and by no calculation of chances can he foretell what knowledge or what quality of mind he will need in the affairs of life. A majority of American students come to the begin-

ning of their college course ignorant of their special bent or their aptitude in higher studies. It is only after a wide and varied trial of their powers in the mastery of branches in all the great departments of knowledge that they find out the studies and pursuits for which they have special aptitude or fitness. It is one of the purposes of general education to disclose the student's bent and mission. The idea of putting before a young lad a catalogue of studies from which he is to select his course is about as hazardous as a later attempt to choose a wife from a collection of photographs, or, what is a fitter illustration, from a list of names of the feminine gender. Our likes and tastes are quite dependent on knowledge, and love before sight is not quite sure to be love at sight; and especially after sight.

ELECTIVE STUDIES.

I here venture the judgment that a choice by students between two or three carefully arranged courses of study in college leaves no rational place for elective studies below the junior year. A knowledge of all the fundamental higher branches is necessary to an intelligent choice among elective studies in succeeding years. And this knowledge is now embodied, more or less fully, in the more progressive courses of study arranged for secondary schools and the first two years of college. These courses include, not only language and mathematics, but also modern science, literature, history and government, etc. While these studies are not taught exhaustively to train experts, they are increasingly taught by scientific methods, thus affording students a broad and fruitful preparation for university work or for special pursuits. It is true a youth's general education may be limited by conditions beyond his control, and so he may be obliged to turn to special studies earlier in the course—as early, it may be, as the close of the high school, or even as early as the close of the elementary school. But whatever be the length of his general education, it should be broad and helpful. Besides, we are now considering what is ideally best, not what hard necessity may demand.

CONCLUSION.

The principles reached in this discussion shed a clear light upon the problem of American education. They show that our schools and colleges for general education should have for their first aim the development and culture of man as man, and his elevation toward the highest and best ideals of human life; and their second and subordinate aim should be to furnish him with knowledge necessary for guidance in the duties of life. They show that such is the harmony between man's nature and his life work that the education which best meets the needs of the former is the best general preparation for the latter—thus converting the terms of Herbert Spencer's famous aphorism. They indicate that the

reform needed in our courses of study is not one of exclusion or narrowing, but of adjustment and correlation; that the "new education" of the near future will be as wide as the soul's needs and as comprehensive as the duties of life. They welcome the modern sciences and arts to their true place in the school and the college, and they open the doors of the university, not only toward the professions, but also toward technical pursuits and the great industries that conquer nature for man.

We thus reach the basis for an exhaustive statement of the aim and purpose of school education—a statement that places man above, and yet prepares him for, his life's work; that neither exalts him into an ethereal region of supreme repose to be satiated with what Arnold calls "sweetness and light," nor trails his manhood in the furrows of life's toil. It unites man to nature, to society, and to God—to nature, that he may discover her laws, utilize her forces, and enjoy her munificence; to society, that he may eradicate its evils, improve its condition, and receive its protection; and to God, that he may be sustained, guided, purified, and saved.

- My earnest plea is for an education which seeks the perfection of man in nature, enjoyment, and labor; an education whose polar idea is "not the mind only, but the man;" an education that prepares the mind to think the truth, the heart to enjoy it, the will to purpose it, and the hand to perform it.

DISCUSSION.

[REPORTED BY R. G. BOONE.]

It was explained by the writer of the paper that the discussion had reference to work below the university entirely.

D. L. KIEHLE raised the question: What has been the contribution of Herbert Spencer on this matter of elective work in education? Has he not subscribed to the view as set forth by Dr. White?

PROFESSOR A. T. ORMOND, Princeton University.—The difficulty with Mr. Spencer's definition that education has to fit one for complete living lies, not in its form, but in the interpretation which he puts upon life. This conception is wrong. It approaches life genetically and not spiritually. The notion is not broad enough to include the higher activities. It is, therefore, inadequate as a pedagogical guide. It does scant justice to the spiritual activities. He gives no satisfactory scale of values. He reduces the ethical relation to a material basis, and does not adequately provide for the humanistic instinct in nature—that instinct which responds to the higher and refining influences of life.

His definition is inadequate from the religious point of view. No scale of values is sufficient that leaves this out.

The standpoint from which our view is to be developed is on the side of art rather than science.

REPORT OF THE
COMMITTEE OF TWELVE ON RURAL SCHOOLS.

To the National Council of Education:

The undersigned Committee of Twelve on Rural Schools, appointed at the meeting of the National Council of Education, Denver, Colo., July 9, 1895, has the honor to submit the following report discussing the rural school problem in its four several aspects, each of which has been the special care of a subcommittee of three persons, who have submitted their results from time to time to the criticism of the entire committee. These subcommittee reports are preceded by a general introduction, written by the Chairman of the Committee of Twelve, in which a history of the formation of the committee is given, together with a brief summary of the recommendations of the several subcommittees. In the appendix will be found a number of valuable contributions illustrative of different points made in the several reports.

HENRY SABIN,
D. L. KIEHLE,
A. B. POLAND,
C. C. ROUNDS,
J. H. PHILLIPS,
B. A. HINSDALE,
S. T. BLACK,
W. S. SUTTON,
L. E. WOLFE,
W. T. HARRIS,
L. B. EVANS,
C. R. SKINNER.

INTRODUCTION.

To the National Council of Education:

The undersigned, Chairman of the Committee on Rural Schools appointed at the meeting of the National Council of Education, Denver, Colo., July 9, 1895, would respectfully submit the following report:

At the meeting of the Council on July 5 the Committee on State School Systems made a report on the rural-school problem, through its chairman, Henry Sabin. C. C. Rounds, President of the Council, urged immediate action, in view of the importance of the subject, and of the growing interest in the question of improving the condition of the rural schools. Other members joined in the discussion, and, on motion of B. A. Hinsdale, the chair was directed to appoint a committee of five, who should submit a plan for the further investigation of this subject.

July 9 the committee reported as follows:

Resolved, That there be undertaken, under the auspices of the Council, an investigation of the subject of rural schools, embracing such topics as revenues and expenditures, the constitution, organization, and duties of boards of management and control, and the provision of suitable teachers. More definitely, said investigation shall be conducted in general on the lines laid down in the report of the Committee on State School Systems submitted to the Council at its present session.

Resolved, That a committee of nine be appointed to conduct this investigation, said committee to consist of the following persons: Henry Sabin, of Iowa; D. L. Kiehle, of Minnesota; A. B. Poland, of New Jersey; C. C. Rounds, of New Hampshire; J. H. Phillips, of Alabama; B. A. Hinsdale, of Michigan; S. T. Black, of California; W. S. Sutton, of Texas; and L. E. Wolfe, of Missouri.

Resolved, That the Board of Directors of the National Educational Association be urgently requested to appropriate, at some session to be held during the course of the present annual meeting, the sum of two thousand five hundred dollars, or such part thereof as may be necessary, to defray the expenses of this investigation, including the publication of the report of the committee.

Resolved, That the committee should report within the period of two years, in such form as it may determine, and that it be authorized to publish its report.

Respectfully submitted,

B. A. HINSDALE,
G. P. BROWN,
D. L. KIEHLE,
J. R. PRESTON,
EARL BARNES,

Committee.

At the same time the committee was empowered to enlarge its number to twelve, and to fill any vacancies which might occur.

On the twelfth day of July the Directors adopted a series of resolutions, under which a sum not exceeding two thousand five hundred dollars was set aside and placed in the Emergency Fund for the use of the committee. The resolutions also provided that not more than one thousand five hundred dollars should be drawn during the year 1895-96; that no compensation should be allowed any member of the committee; and that the fund may be drawn upon, if necessary, to defray in whole or in part the publication of the report. It is proper to add here that at a

meeting of the Directors at Buffalo, upon the request of the Council, an additional one thousand dollars was placed in this fund for the use of the committee under the same conditions as above.

The committee held its first meeting July 10, 1895, at which time, on motion of Dr. Hinsdale, the committee was increased from nine to twelve by adding the following persons: W. T. Harris, Washington, D. C.; L. B. Evans, Augusta, Ga.; C. R. Skinner, Albany, N. Y.

Messrs. Sabin, Kiehle, and Hinsdale were constituted a special committee to formulate a plan of work and furnish members with copies of the same; also, to divide the committee into sections and to assign appropriate work to each.

The committee as finally constituted consisted of the following gentlemen:

Henry Sabin, Des Moines, Ia., Chairman; B. A. Hinsdale, Ann Arbor, Mich.; D. L. Kiehle, Minneapolis, Minn.; W. T. Harris, Washington, D. C.; A. B. Poland, Trenton, N. J.; C. C. Rounds, Plymouth, N. H.; J. H. Phillips, Birmingham, Ala.; S. T. Black, Sacramento, Cal.; W. S. Sutton, Houston, Tex.; C. R. Skinner, Albany, N. Y.; L. B. Evans, Augusta, Ga.; L. E. Wolfe, Kansas City, Mo.

The special Committee of Three met in Chicago October 25 and 26, 1895, and, after consultation, divided the entire committee into four subcommittees, and assigned certain topics to each for investigation and report. These subcommittees were constituted and the work assigned to each in accordance with the following schedules:

I. School Maintenance. Subcommittee: B. A. Hinsdale, Chairman; W. S. Sutton, S. T. Black.

This branch of the subject was divided for convenience into three subheads:

1. Revenues.—Permanent school funds; taxation, general and local, embracing state, county, township, and district taxes; miscellaneous sources of school income, such as fines, licenses, gifts, etc.

2. Expenditures.—Machinery and methods of distribution, general and local. The main points to be considered are the channels through which the funds reach the schools, and the rules and methods governing their distribution and application.

3. Organization of Business Administrative Machinery.—The county, district, and township-unit systems; the consolidation of schools; the transportation of pupils; county, township, and district high schools; the relation of rural schools to city schools. Inquiry should be made into the main social, industrial, and economical factors that condition rural education, as density of population, wealth, means of communication, etc.

II. Supervision. Subcommittee: L. B. Evans, Chairman; C. R. Skinner, Henry Sabin.

1. The manner of electing the superintendent, state, county, district, or township.
2. Minimum qualifications required of each, and term of office.
3. The relation of the superintendent, state, county, district, or township, to the teachers and pupils as officer and adviser.
4. The relation of the superintendent, state, county, district, or township, to school officers, and their duties.
5. The relation of the state superintendent to the county and township superintendent.
6. The relation of the superintendent to the public at large, as creating and shaping public opinion in rural districts.
7. The relation of the superintendent to school buildings, architecture, sanitation, and hygienic conditions.

III. Supply of Teachers. Subcommittee: C. C. Rounds, Chairman; J. H. Phillips, D. L. Kiehle.

1. An inquiry into the assistance rendered rural schools by the following facilities for preparation:
 - (a) Normal schools.
 - (b) Training schools in high schools and academies.
 - (c) Summer training schools.
 - (d) Institutes.
2. An inquiry into the means provided for the improvement of teachers already in the service.
 - (a) Teachers' meetings and associations.
 - (b) Reading circles.
 - (c) Libraries and current literature.
3. An inquiry into the manner of electing, employing, and paying teachers.
 - (a) By what authority examined and certificated.
 - (b) By what authority employed.
 - (c) Terms of engagement, certificates, and salaries paid.

IV. Instruction and Discipline. Subcommittee: W. T. Harris, Chairman; A. B. Poland, L. E. Wolfe.

1. Methods of teaching and government peculiarly affecting rural schools.

2. Courses of study, text-books, and other appliances.
3. Working programmes.
4. Gradation and classification of pupils.
5. The relations of rural schools to their environments; as to farm life, mining life, etc.

It was also provided that the investigation of the several subdivisions of the general subject should follow two main lines:

1. The condition of rural schools now existing.
2. Changes to be recommended; what is, and what should be.

It was not thought necessary that the committee should go into history or development farther than to make the conditions that now exist, and the reforms that are recommended, intelligible. It was also recommended that changes to be made, or reforms to be proposed, should have respect to existing facts; that they should be practical in the rational sense of that word.

It was further left to the several subcommittees to determine the methods to be employed in carrying on their work, and to exercise the greatest freedom in enlisting aid from every possible source.

Each subcommittee was thus left free to formulate such questions as seemed best designed to elicit the desired information in the most definite form.

The committee met at Jacksonville, Fla., February 18 and 19, 1896, for consultation and comparison of results. An informal meeting was held during the sessions of the National Educational Association at Buffalo in July, 1896, at which time it was determined to hold a meeting of the full committee at Chicago November 18 to 21, 1896. The chairman of each subcommittee was also directed to have such preliminary matter ready at that time as would embrace all the essential points necessary to a fair understanding of the scope of the final report to be made to the Council in July. It was also voted to ask certain experts in rural-school matters to meet with the committee, in order that it might have the benefit of their experience.

The committee met at the Auditorium in Chicago, as determined. The entire committee was present at each session, with the exception of D. L. Kiehle, who for satisfactory reasons was not present until Thursday morning. The following gentlemen were present upon invitation of the chairman:

John MacDonald, editor of the *Western School Journal*, Topeka, Kan.; W. W. Stetson, State Superintendent of Maine; J. L. Pickard, of Iowa City, Ia.; O. T. Bright, County Superintendent of Cook county, Ill.; Albert G. Lane, City Superintendent of Chicago; D. E. McClure, County

Superintendent of Oceana county, Mich.; W. H. Chandler, of Madison, Wis.; President F. W. Parker, of the Chicago Normal School; G. R. Shawhan, County Superintendent of Champaign county, Ill.; John Trainer, of Decatur, Ill.; T. C. Chamberlin, of The University of Chicago; J. J. Schobinger, of Morgan Park, Ill.; W. S. Jackman, of the Chicago Normal School; A. W. Edson, State Agent, Boston, Mass.

Wednesday and Thursday were devoted to general discussion, one half day being allotted to each of the four subcommittees in the following order: School Maintenance, Supervision, Supply of Teachers, and Instruction and Discipline. Friday and Saturday were devoted to the consideration of the preliminary reports submitted by the chairmen of the respective subcommittees. The sessions were held from 9 A. M. to 12 M. and from 3 to 6 P. M. In order to facilitate discussion printed or typewritten copies of the main propositions in each report were placed in the hands of those present. During Friday and Saturday the reports were read section by section, and, after alterations and amendments as suggested by various members of the committee, they were adopted.

It was further ordered that the reports of the different subcommittees should appear in the printed volume in the following order:

1. School Maintenance.
2. Supervision.
3. Supply of Teachers.
4. Instruction and Discipline.

On motion, the entire matter of printing the report, when completed, was intrusted to the charge of the chairman of the committee, with the suggestion that he confer with the United States Commissioner of Education in regard to securing the co-operation of the national bureau for publication purposes.

T. C. Chamberlin, of The University of Chicago; W. S. Jackman, of the Chicago Normal School, and F. H. King, of Madison, Wis., were requested to prepare a discussion of the possibilities of a course of study especially adapted to agricultural environments. This discussion constitutes *Appendix G* of this report.

Appendix A, consisting of a paper read by B. A. Hinsdale before the Department of Superintendence at Jacksonville, is published by order of the committee. The course of study for rural schools and the paper by Dr. White, designated as *Appendix I*, and the paper by F. W. Parker, *Appendix H*, are inserted by the same authority. The other matter in the appendix has been placed there in accordance with a vote of the committee, leaving the selection to the choice of the chairman of each subcommittee and of the general committee.

The date for publication of the report was fixed at from four to six weeks before the meeting of the National Educational Council at Milwaukee. After determining that the chairman of each subcommittee should send a typewritten or printed copy of his report to each member of the committee before publication for suggestions or amendments, the committee adjourned.

In the foregoing historical statement no attempt has been made to follow the exact order of proceedings, but only to gather from the Secretary's records such main points as will give the Council exact information of the methods adopted by the committee.

As soon as possible after the adjournment of the committee the chairman of each subcommittee prepared his report, and printed or typewritten copies were sent to other members, and also in all cases to persons who were supposed to be able to point out omissions or to suggest alterations. As a result these reports represent the combined experience of many competent persons besides members of the committee. This method led to much correspondence on the part of the chairmen, but it has undoubtedly aided them very materially in making a broader and much more comprehensive report. The committee found itself confronted from the beginning with the fact that the environments of schools differ so much in various sections of the country that it is impossible to make other than very general suggestions. Conditions vary so much between Maine and California, or Minnesota and Texas, that what would be an excellent system in one would possibly fail in the other.

SCHOOL MAINTENANCE.

Those who read the following reports will find that several recommendations are made by more than one subcommittee. Thus in the matter of organization the necessity of adopting a larger unit than the district, as the township or the county, is very strenuously insisted upon by two or more subcommittees. It is a fact of such great importance that other essential points hinge upon this. The arguments are very fully stated in the report of the Subcommittee on School Maintenance, but the general committee is fully agreed upon the desirability of effecting this change wherever the district system at present prevails. It would conduce to effectiveness and simplicity of organization; to economy in the use and distribution of funds; to the equalization of the burdens of taxation, and to a system of supervision which would produce better results from the instruction given in the rural schools.

Again, all the subcommittees are strongly in favor of the consolidation of schools which are too small to employ profitably the time of one teacher into larger schools, when practicable, in order that better instruction may be provided than is possible under the present system. This involves

also paying for the transportation of pupils to some central school at the public expense. The different subcommittees have reached this conclusion, each from its own standpoint. The inferences drawn from facts and figures are too obvious to need any argument. The conclusions arrived at in the discussion of the two points, organization and consolidation, are very broad, and would seem to be applicable to some section of nearly every state in the Union.

The manner of raising and distributing the revenues has been carefully investigated, and the subcommittee having that subject in charge seems to have reached very wise and just conclusions. The township, or special district, in which the parents of the pupils reside should contribute to the school funds, as should the county and the state. Every interest concerned in the education of children should bear a proportionate share of the burden of taxation. In the distribution of school funds, because of the community of interests involved in popular education, the strong and wealthy must contribute to the support of schools in weak and impoverished districts. It may not be possible to provide equal school facilities in every part of the state, but every district in which a school is established should be assured beyond all doubt of a sufficient sum of money to employ a competent teacher for the minimum number of months or days fixed by the law. The duty of providing for the pupils of the rural schools the means whereby they can have the benefit of high schools in their neighborhood has not been overlooked. It is not necessary to discuss fully these points. Attention is invited to them as set forth in the report of the Subcommittee on School Maintenance.

SUPERVISION.

The subject of school supervision is discussed under the general divisions of state, county, township, and district. The task assigned this subcommittee is difficult because, as far as rural schools are concerned, there are no well-defined lines of work upon which there is a general agreement. There is great need of supervision which is intelligent and which carries with it some degree of authority. As a general thing, the officer known as state superintendent has only advisory authority. He can make suggestions, but they carry with them no more force than there is in the character and influence of the officer who makes them. He is too far removed from the rural schools, and is too much engaged in other matters connected with his office, to come into close touch with them and their present interests.

No one questions that supervision should be compulsory. In fact, such is the case in most states today. The great question connected with it is how to make it effective. A supervisor who has charge of a hundred schools or more, scattered over an entire county, finds it impossible

to control and direct them in accordance with well-devised plans. Accordingly the subcommittee urges township or district supervision where it is practicable, or that each supervisor should have such deputies or assistants as will enable him to reach every part of his field. Again, if supervision is to be effective it must be the product of skill and intelligence. As well put an ordinary seaman, selected from the crew by lot, in charge of an ocean steamer, with its precious cargo of lives and wealth, as to place a raw, uncultivated man or woman, selected by the chances of a political convention, in charge of the schools in which our youth are being trained for citizenship. The subcommittee is of the opinion that certain qualifications, moral and mental, with some experience in teaching, should be exacted from everyone who aspires to the duties of a supervisory office. The duties which are incumbent upon a supervisor of schools have been so minutely discussed that it is not necessary to restate them here. It is sufficient to say that knowledge and skill, enthusiasm and patience, sympathy and forbearance, firmness and justice, are requisite in one who would discharge his duties conscientiously and with due regard to the highest good of all concerned.

The importance of bringing the school into touch with the farm and the home has been dwelt upon at some length (*Appendix O*). To this end the supervisor should make himself thoroughly acquainted with peculiar conditions of life in his supervisory district. It is not enough that he visit the school and consult with the teacher. He must meet school officers and parents, awaken their sympathy and arouse their interest, if he would do his whole duty. He must have a controlling influence in the selection of teachers, in the erection of school buildings, especially as concerns sanitation and hygiene, in teachers' meetings, and in general school work throughout his entire territory.

A wise supervisor cannot fail to observe carefully the environments of the school, which exert a powerful, though unconscious, influence upon the character of the pupils. The bearings of the æsthetical upon the ethical side of the child's nature, the relations of music and art as determining the development of the child along right lines, should be observed and guarded as well in the rural as in the city schools.

SUPPLY OF TEACHERS.

The question of the support afforded teachers is one great hindrance in the way of improving the rural school. The following table, showing the average monthly salaries paid teachers in rural schools, has been compiled from answers to circulars sent out to state superintendents. It is unfortunate that in most states the statistics make no distinction between city and rural school-teachers. Consequently many of the returns are

estimated. They are valuable, however, for purposes of comparison and general information.

	Males	Females		Males	Females
Alabama	\$25	\$20	Missouri	\$40	\$34
Arkansas	33	30	Montana	60	45
California ¹	67	56	Nebraska	35	30
Colorado ²	50	45	Nevada	85	60
Connecticut	30	30	New Hampshire	30	30
Delaware	35	33	New York ⁴	37	37
Illinois	30	25	Ohio	35	29
Indiana	40	35	Pennsylvania ⁵	42	33
Iowa	35	30	Rhode Island	40	36
Kansas	40	32	South Carolina	30	27
Kentucky	36	34	South Dakota	36	31
Louisiana	40	33	Utah	53	37
Maine	35	22	Vermont	39	27
Maryland	29	29	Virginia	28	25
Massachusetts ³	32	26	West Virginia	36	36
Michigan	29	25	Wisconsin	46	30
Minnesota	40	31	Wyoming	45	40

In connection with above table we must take into account that in only a few states is the average length of the school over eight months. This includes cities and towns, as well as rural districts, so that it is fair to conclude that in general the country teacher finds employment not to exceed seven months in a year, and often not more than five or six.

The subcommittee regrets that so few are able to apprehend the qualities essential to a good teacher. Professional fitness is ignored in nearly every case. The smaller the unit of organization, the greater is the disposition to engage teachers for short periods of time. All engagements should be for one year at least, and frequent changes of teachers should be discouraged.

Perhaps the most important subject intrusted to this subcommittee has reference to the training and preparation of teachers. There is no doubt that the normal school in most states does not reach down and take hold of the common district school. There is room, as indicated in the report, for a series of normal training classes with a course of one year, or at most two years, not modeled after a state normal school, but suited in all respects to the needs of a class of young people from whom we draw nearly all our rural school-teachers. Instruction for one year in such a school could be made to so inspire students with a desire for knowledge,

¹ Includes schools of not more than two teachers.

² Includes the schools in the agricultural sections only.

³ Based on fifty-two male teachers and 143 female teachers in towns under \$500,000 valuation.

⁴ \$9.26 a week, counting thirty-three and one-third weeks in a year.

⁵ Not including the city of Philadelphia.

to so fill them with the teaching spirit, as to work a most beneficent change in the schools coming under their charge. The proposition to establish continuous sessions in normal schools, as set forth in the sub-committee's report, is full of promise for the improvement of rural school-teachers without withdrawing them from active service. The terms and courses could, under the plan, be so adjusted as to enable them to attend a normal school for work in regular courses of study during that large part of the year not occupied in teaching. A course for one year is indicated below. If extended to two years, the extension should consist not so much in the introduction of new branches as in doing something more than elementary work in the branches already in the curriculum.

COURSE OF STUDY FOR ONE YEAR OF FORTY WEEKS.

General Divisions	First Term	Second Term
Language.	Reading and Literature.	Grammar. Elements of Rhetoric.
Mathematics.	Arithmetic. Algebra.	Geometry.
Natural and Physical Science.	Geography. Elements of Chemistry.	Botany. Elementary Physics.
History.	U. S. History. Civil Government.	General History. Biography.
Professional Studies.	School Economy. Elementary Psychology Practice Teaching.	Physiology with special reference to hygienic conditions. Practice Teaching.

The number of lessons in each branch per week must be determined by the conditions and necessities of the class. Singing and drawing should have such a place as their importance demands. At least two lessons per week for each of them should be insisted upon.

The course of study to be completed in one year is arranged according to relation of subjects and not according to order of study. It embraces, so far as elements are concerned, those subjects which are necessary in order to enable a teacher to deal with organic and inorganic nature, with history and civil government, with literature and language, and with so much of music and art as the conditions of the school will admit. While provision is made for professional training, the success of such a course as this as a means for preparing teachers for their work will depend almost entirely upon the good judgment and skill of those who are intrusted with the management of the school. The tendency to overload

such a course, to crowd two years' work into one, will have to be very carefully guarded against. The entire course is intended to be only elementary, and is for the benefit of a large class of teachers who have but little preparation, and are not able from various reasons to devote more than one year's time to attendance upon a normal school. The advantages of a school of this nature would be greatly enlarged by the possession of a carefully selected library, and of sufficient apparatus for purposes of illustration and experiment. If the students could be taught to make this apparatus, with maps, charts, etc., for use in rural schools, it would add to their usefulness as teachers. Very great advantage would accrue to the pupils from coming in contact with disciplined minds in the persons of their instructors. But few rural teachers know how to study or how to get the most out of the books which fall into their hands.

Summer schools, reading circles, and institutes have received their share of attention. The whole ground has been well covered and will repay a careful perusal.

The scheme for the examination and certification of teachers has been thoroughly digested. There will be some who may not agree with the subcommittee in all particulars, but no one will dispute the fact that too many teachers in the rural schools are contented with the lowest grade of certificate which will answer the purpose of the law. There is a great necessity for some scheme such as is here recommended, whereby teachers can rise step by step in their calling, if they earnestly desire to improve. On the other hand, this scheme furnishes a reasonable excuse for not affording further professional recognition of any kind to those who show no disposition or no ability to do anything better in the line of preparation for their work.

INSTRUCTION AND DISCIPLINE.

The report under this head will be found to embrace several important recommendations. Some of these will provoke discussion, but most of them are of such a nature as to commend themselves to every thoughtful person. The report opens a broad field of inquiry, which must of necessity receive more attention as the wants and necessities of rural schools are better considered.

The evils of attempting to grade the rural school as the city school is graded are very clearly set forth, accompanied by the suggestion that those normal schools which as part of their work train teachers for rural schools should carefully impress upon such teachers the necessity of considering the size of the school in determining the uses and abuses of grading and classifying pupils. This suggestion is all the more pertinent in view of the movement in many states to require some previous professional training as a prerequisite for entering any public school as a teacher.

Considering that the course of study for the rural school need not differ in any material point from that provided for the city school, it is urged that the aim of such a course is to enable the pupil to recognize the conditions of inorganic and organic nature, and to pursue the studies of literature, language, and history, as they are necessary for his entrance upon civilization. The difference in courses of study for rural or city schools is found to be in those collateral branches which relate to the environment of the pupil or to the neighborhood in which he dwells. The report upon this point is very full and will repay a careful study of its details. The subcommittee calls especial attention to the relation of the course of study to the system of grading and classification. The suggestions made are of great practical value in any discussion which endeavors to determine the method of adapting a course of study to the wants and conditions of rural schools. It cannot but be very helpful to be told that the course of study is the measuring rod used only to determine at what point in his work the pupil has arrived, and not a Procrustean bed used to give the work the lifeless beauty of a dead uniformity.

The consolidation of those schools which have become so reduced in numbers as to render it unprofitable to maintain them separately, the transportation of pupils at public expense to other schools than their own, and the concentration of higher-grade pupils at a central point, are urged as means of lessening many of the evils from which rural schools are suffering. This provision, having been grafted into the law of several states, bids fair to prove of great benefit. Wherever it has been tried it has commended itself as economical, and as a means of affording better teachers and consequently better schools. The matter of improved roads enters incidentally into this discussion, as having great bearing upon the question of transporting children to central points for school purposes.

In connection with school exercises at the town or county center, once or twice a year, competitive examinations are not recommended, unless they are very carefully guarded. The feature of social intercourse, the stimulus which comes from meeting with his mates, have advantages which ought not to be overlooked or neglected.

Home reading, with what is termed school extension, is dwelt upon at such length as its prominence demands (*Appendix O*). To carry good reading material, whether of science, literature, or fiction, prose or poetry, into the schools and homes of the rural districts must be a part of any educational scheme which has for its object making country life more endurable or more attractive. The various recommendations of this part of the report are worthy of careful consideration at the hands of those even who may not wholly agree with them.

CONCLUSION.

Your committee has called in the aid of a number of persons whose time and thought have been largely given to matters connected with the management and instruction best suited to the wants of rural schools. It was found impossible to embrace the entire matter placed at our disposal in the body of the report. We have, therefore, printed much of it in the form of an appendix, believing that it will add largely to the value of this report. It is not to be supposed that every point has been covered, or that the entire subject has been exhausted. The committee has endeavored diligently and to the best of its ability to throw some light upon what may possibly be regarded as a collection of subjects embracing a very large field. While there are many points worthy of especial attention, I have gathered up the following as a brief summary of those which may be considered of most pressing importance :

SUMMARY.

1. For purposes of organization, maintenance, or supervision, nothing should be recognized as the unit smaller than the township or the county ; the school district is the most undesirable unit possible.

2. Every community should be required to raise a certain sum for the support of its schools as a prerequisite for receiving its share of public money. A certain definite sum should be appropriated to each school out of the state funds, and the remainder should be divided in accordance with some fixed and established rule, a discrimination being made in favor of townships most willing to tax themselves for school purposes.

3. One of the great hindrances to the improvement of the rural school lies in its isolation, and its inability to furnish to the pupil that stimulative influence which comes from contact with others of his own age and advancement. The committee, therefore, recommends collecting pupils from small schools into larger and paying from the public funds for their transportation, believing that in this way better teachers can be provided, more rational methods of instruction adopted, and at the same time the expense of the schools can be materially lessened.

4. There is a tendency to fill the rural schools with untrained, immature teachers. The establishment of normal training schools, under competent instructors, with short courses, each year of which shall be complete in itself, would do much to remedy this evil. The extension and adjustment of the courses and terms of the state normal schools so as to constitute a continuous session would enable them to contribute more directly than now to the improvement of the teachers of rural schools (*Appendix S*). The state would then be justified in demanding some degree of professional training from every teacher in the rural as well as in the city schools.

5. The establishment of libraries, the prosecution of the work of school extension by lectures and other means, the introduction of such studies as will have a tendency to connect the school and the home, especially those having a direct bearing upon the everyday life of the community, and the necessity of applying the laws of sanitation to the construction of rural schoolhouses, demand immediate attention.

6. The rural schools are suffering from the want of official and intelligent supervision. In every state some standard of qualifications, moral and intellectual, with some amount of actual experience, should be demanded by law from those who aspire to fill the office of superintendent or supervisor of schools.

7. Good morals and good manners constitute an assential part of an educational equipment. The inculcation of patriotism, of respect for law and order, of whatever tends to make a good citizen, is of as much importance in a small as in a larger school. Regularity, punctuality, obedience, industry, self-control, are as necessary in the country as in the city school. Country school-teachers should call to their aid the beautiful things in nature, that with reverential spirit they may lead the children to reverence Him who hath made all things good in their season.

HENRY SABIN,
Chairman.

REPORT OF THE SUBCOMMITTEE ON SCHOOL MAINTENANCE.

The maintenance of an efficient state system of public instruction involves numerous sociological factors of an important character. This is particularly true in a democratic state, where public opinion gives the final sanction to all public activities. Moreover, there is good reason to think that it is even more important to consider such factors carefully when providing rural schools than when providing urban schools. The bearing of the wealth of the state, both in the aggregate and in relation to population; the density of population and the ratio of rural to urban population; the ratio of the adult or wealth-producing population to the population of legal school age; the facilities for travel and the character of the people in respect to race elements—the value of such factors as these in the problem is almost too plain for argument (*Appendix A*).

The organization and administration of the powers of government must also be considered. The government of the United States stands to all the members of the Union in the same relation; that is, within the states it has no proper educational function whatever. The state government, however, is a constant factor: it exercises the central state authority. But

when we take the next step we are at once confronted by contradiction and confusion. First, we find in New England the town system of local government. Here nearly all the local governmental functions are performed by the town; the county exists, but it is more a judicial than a political unit, and in Rhode Island it is wholly judicial. The town is much, the county little. Secondly, the county system, which exists throughout the South and in several of the western states, more than reverses these conditions. The county is the organ of local government, and the township does not commonly exist. The county is divided into districts for the purpose of defining the jurisdiction of justices of the peace, into election precincts, and sometimes into school townships. Here the county is everything, the town nothing. Thirdly, the old middle states and most of the western states have what is called the mixed or compromise system. In these states the township is less than in New England and the county more, the county less than in the South and the township more; in other words, both township and county are employed in something like equal measure. Again, two types of the mixed system are found in different states. In New York and the states that have imitated her the county legislative and executive board is composed of supervisors elected by the several townships, while in Pennsylvania and the states that have followed her example this board is composed of commissioners elected by the county at large. The county is, therefore, a governmental organ in all the states, while the township is found only in two groups of states. Moreover, in those states where the town or township is found it varies considerably in powers in comparison with the county. These elementary governmental facts it is necessary to remember, because they directly affect the matter in hand. Manifestly, the people will not be apt to create local organs of government for any one single purpose unless they deem it absolutely necessary; on the other hand, they will manifestly use for any such purpose, as far as consistent, the same organs that they use for other local purposes. This is just as true of schools and education as of other public interests. Except that Vermont has a county examiner of teachers, no mention is made of the county in any New England school law;* no mention is made of the town or township in any southern state; while the states that have the compromise system use both the county and the township as organs for carrying on their schools. It will be seen that no account is here taken of the city or municipality, because this is common to all the states and does not relate to rural schools.

* Vermont, Maine, and New Hampshire once enacted laws creating the county superintendency, but these laws did not remain long on the statute books. No state is likely to use the county for an administrative school purpose unless it uses it for other administrative purposes.

An ambiguity in the use of the term *town* is also to be mentioned. The *township* of the middle and western states corresponds in general to the New England *town*; while in these states the *town* is a village, hamlet, or even city. All the recommendations made in this report will recognize distinctly the facts now stated.

Still another preliminary explanation is called for. The term *district*, as used in school legislation and in educational discussions, is very misleading. The two leading senses of the word must be sharply discriminated. This can be done by describing the two principal forms of local school organization.

1. *The Town- or Township-unit System.*—This is something wholly different or separate from the town system of local government described above. The two systems may exist together, but not of necessity so; the town- or township-unit system, called also the *town-district* system, is found in connection with both the town and the compromise systems of local government; it could not exist with the county system, as a matter of course. The town system of local government relates to local affairs generally; the town- or township-district system to schools only. The name *township-unit system* means only that the town or township is the ultimate unit of school organization and administration. This unit, with such assistance as it receives from the state or county, provides and carries on its own schools independent of any other unit. It raises funds by taxation and expends them, subject only to the law of the state. It is the organized town or township, a body corporate and politic, under its educational aspect. The local authority is sometimes a school committee, as in Massachusetts; sometimes a board of education, as in Ohio, and again a township trustee, as in Indiana. Again, the township-unit system does not necessarily involve the consolidation of rural schools. The school children within the unit may all be brought together in one central school at some advantageous point, or they may attend a plurality of schools scattered through the township. In the second case, the limits or boundaries of the several schools must be marked off for the regulation of school attendance, unless indeed pupils are permitted to attend such schools as they please, and these areas are commonly called *districts* or *school districts*. In Ohio they are known as *subdistricts*, and they serve also as units of representation in the township board.¹ Here, then, are

¹ The explanation of the Ohio law on this point is historical. Previous to 1892 the township was the school district proper, but this was divided into subdistricts. The township board of education raised all the local funds by a tax levied on the taxable property of the township, and apportioned them among the subdistricts; the subdistrict boards of directors employed the teachers and carried on the schools. The voters of the subdistrict, in annual school meeting, elected the three directors, one every year, for three years, and these again elected one of their number clerk, who represented his subdistrict in the township board. Under the Workman Law of 1892 all the old powers of the directors

two clear uses of the term *district*: one is the town or township, and the other a part of the town or township defined primarily for the regulation of school attendance, but also sometimes serving as a unit of representation.

2. *The District System.*—Here *district* is used in quite another sense. Geographically, the school district is now commonly a subdivision of a town, as in Connecticut, or of a township, as in Michigan, or of a county, as in the county-system states. Ordinarily it is a body politic and corporate, and is the ultimate unit of school organization and administration. It has its own school committee or board elected by the voters of the district, in school meeting, and, with such help as it receives from the state or county, it builds its own schoolhouse and provides and carries on its own school or schools. It is, therefore, a taxing as well as an administrative unit. Under this system the district is the controlling factor of school organization. Not only is it the most democratic form of school organization, but it has been called "probably the most communistic as well as democratic feature of our political institutions, and is certainly the smallest minor civil division of our system."¹

Still other districts are mentioned in the laws and reports, as special districts, city districts, borough districts, joint districts, and the like; but these names do not present any new features of an essential character.

These explanations premised, the subcommittee will divide this report into three grand divisions, *viz.*, Revenue, Distribution, and Organization. The last topic, however, will be considered only so far as relates to school maintenance. By school maintenance is meant the provision and support of public schools.

REVENUE.

The subcommittee submits that the first essential to the material improvement of the rural schools of the country is the provision of revenue sufficient for their adequate support. Accordingly, this is the first subject to be considered.

The educational items in the budgets of all progressive countries have assumed great proportions, and are all the time growing. The Commissioner of Education reports the expenditure for common schools in the states of our Union for the year 1894-95, not including payments on bonds, at \$178,215,556. Seven states expended more than \$5,000,000 and less than \$10,000,000 each, and five more than \$10,000,000 and less

were transferred to the township board, but the subdistrict was left for the regulation of school attendance and to serve as a unit of representation in the township board.

¹Mr. Wellford Addis, specialist in the Bureau of Education. See chap. xxxiv. of the Report for 1894-95, "The Social Unit in the Public School System of the United States."

than \$20,000,000 each. New York alone stood above \$20,000,000. In 1888-89 the total for the country was \$132,129,000, and in 1883-84 only \$103,909,528. But, unfortunately, we have no statistics showing the division of these vast sums between the rural districts and the towns and cities. A *city*, in the dictionary of the National Census Office, is a concentration of population containing 8,000 people or more of all ages, and in 1894-95 there were 574 cities in the country. The Commissioner of Education reports for the year 1894-95 that 3,302,841 children were enrolled in the schools of these cities, to 10,894,911 enrolled in other schools. He reports further that the maintenance of these city schools cost \$74,721,332, of the others \$102,876,359. But this is no proper division of rural and urban schools, since the educational conditions existing in many centers of population containing less than 8,000 people are the same as those existing in the 574 cities. At present it costs much more to school 1,000, 10,000, or 100,000 children in the cities than in the country, but this is mainly due to the fact that the education furnished is so much greater in quantity and so much better in quality. It is not improbable that, if rural schools were brought as near as possible to the level of urban schools, they would be quite as costly. At least, it is evident that the first condition of good rural schools is a sufficiency of funds with which to provide and maintain them. How shall these funds be provided?

I. A century ago the American people began to take an interest in the creation of permanent school funds or endowments. This interest was originally stimulated, if not created, by the policy that Congress foreshadowed in 1785, and subsequently firmly established, to endow the common schools in the public-land states with liberal grants of public lands. In every state in which Congress has exploited the wild lands either one-thirty-sixth or one-eighteenth part of such lands has been dedicated to the public schools. Beginning with Connecticut in 1795, nearly all the non-public-land states have also created such endowments out of their own resources. Several of them devoted the United States deposit fund of 1837 to this purpose. At the beginning of the century no one dreamed to what proportions public education would grow in one hundred years; and men thought, not unnaturally, that permanent endowments would greatly ease the burden of taxation for school purposes, and would keep the educational machinery of the state constantly running and well regulated. It will not be denied that, relatively, these funds have come far short of meeting the expectations of those who laid their foundations. There can be little doubt that, in many of the states, and particularly when such states were new and poor, they have hastened educational development; but it is quite certain that they have often done great harm, causing the people to rely upon the feeble income

derived from them, and to turn their faces away from the only adequate source of school maintenance, that is, public taxation. Texas has been gazetted as having the most magnificent possibilities of any state in the way of a permanent school fund, but some citizens of that state are now questioning whether these possibilities may not prove other than an unmixed blessing (*Appendix B*). The fact is, public schools in the United States have far outgrown all present or prospective endowments. In 1888-89 the income from such funds was \$9,825,000 in a total of \$132,125,111; in 1894-95 the corresponding figures were \$8,336,612 and \$177,597,691; that is, the per cent. fell from 7.4 to 4.7 in six years. New York and Ohio derive less than \$300,000 each of their great school revenues from permanent funds, and Pennsylvania derives nothing from such a source. In fact, it would require a permanent fund of \$400,000,000 to carry on, at the present scale of expenditure, the common schools of either New York or Pennsylvania. The subcommittee submits, therefore, that all permanent school funds, either state or local, should be carefully husbanded and wisely administered; that they should be preserved intact, and the income be scrupulously applied to the support of schools; that, under special conditions, it may be wise to augment old funds or create new ones, as when certain miscellaneous revenues can be devoted to that purpose; but that such funds must necessarily play a constantly diminishing part in popular education. Massachusetts is committed to the policy of adding to her fund \$100,000 a year, raised by taxation, until a total of \$5,000,000 shall be reached, and New Jersey to the policy of similarly dedicating the proceeds of certain riparian rights that belong to the state; and to this there is no objection; but for these states, or any others, to lean heavily upon such funds for school maintenance would be a most fatuous policy. Public education is, or at least should be, a recognized function or service of the state; the public schools of the country are civil schools, created and carried on by the civic authority, and they must rest ultimately upon the same general means of support as the other functions or services of government. As well, therefore, endow any other branch or function of the state government, such as the asylums and hospitals, the judiciary, the civil service, or the militia, as the state schools!

II. Gifts to popular education should be sedulously encouraged. Education has long been a favorite object with public benefactors, as the annals of every progressive country show, and none more convincingly than our own. No doubt when the public mind is aroused to the advantages of popular education, and school taxes are abundant, such persons who choose an educational object for their beneficence will rather be inclined to seek some other form or kind of education. Still, the constitution or laws of nearly every state, if not indeed every one, provide

for the acceptance and use of private gifts for school purposes, and there are generous persons who are peculiarly interested in the common schools. Scattered over the country are many local public-school endowments that had a private origin, and such gifts have not come to an end. The subcommittee is not aware that there are any statistics showing how far private benevolence contributes to public education, but it is apprised that the contribution is by no means contemptible, and it believes that it might be made considerably larger than it is. The favorite forms of such contributions, under existing conditions, are most likely to be land for building sites, and apparatus and libraries for schools; and the subcommittee is of the firm opinion that much more could be done than at present in all these directions, and particularly in the way of procuring apparatus and books for the schools in communities where the public funds that are available for these purposes are meager or insufficient.

III. The great resource of the public school *is*, and *must continue to be*, some form or forms of public taxation. The ratio of the total school revenues derived from taxes to those derived from permanent funds is all the time growing, and it will continue to grow. At two periods separated by six years the sources of the common-school revenues expressed in per cents. were as follows :

Year	Taxes	Permanent funds	Other sources
1888-89.....	85.9	7.4	6.7
1894-95.....	85.7	4.7	9.6

Manifestly such areas or units of taxation should be created, or continued if already in existence, as will fully develop the sound American principle, that *the whole wealth of the state shall be made available for educating all the youth of the state*. This is both right and necessary, for it must be remembered that, in the United States, education is a civil, or state, function, to be supported like other similar functions. What shall these units of taxation be? The subcommittee names those following as coming under the principle just stated :

1. *The State*.—A liberal provision of funds from the state treasury, to be distributed according to some rational method, is indispensable, as a rule, to the maintenance of a good system of state schools. Formerly the burden was mainly or wholly thrown upon the local units. The old Massachusetts plan was to throw upon the towns the whole burden of maintaining their own schools. But the greatly increased cost of schools, growing out of enhanced salaries, longer terms, and improved material equipment, long ago demonstrated that this plan must be materially

modified. Many local taxing units are too poor to carry such a load, and they must either abandon all hope of good schools, or they must receive assistance from the state or social whole. This fact began to gain recognition as early as the middle of the century. When the constitution of Ohio, adopted in 1851, provided that the legislature should make such provisions, by taxation or otherwise, as, with the interest arising from the permanent school fund, would secure a thorough and efficient system of common schools throughout the state, the law-making power hastened to levy upon all the property of the state, as rated by the assessors, a state school tax of two mills on the dollar, to be distributed on the basis of the school enumeration. Taking the country together, the cost of public education is divided between two or more taxing units. Still the fact remains that the part which falls to the local unit is often disproportionate. In 1888-89 the per cent. of the total amount of school revenues raised by local taxation was 66.8 to 19.1 per cent. raised by state taxation. In 1894-95 the corresponding per cents. were 67 and 18.7. The ratio of the two elements is variable in different divisions of the Union and in different states of the same division. The per cents. raised by state tax, as reported, range all the way from zero to a maximum of 83.2, found in North Carolina. We should naturally expect the southern states, since local government is there less fully developed than at the North, to rely relatively much less on local taxation and much more on state taxation, and such is the fact. But political habit is not the only factor that enters into the problem; economical conditions also assert themselves. In a state where wealth abounds, and is somewhat evenly distributed throughout its limits, as where manufacturing and commercial towns are frequent, there is not the same necessity for the state, as a unit, to assume a large proportion of the whole burden that there is in a state where wealth is meager, and where such wealth as exists is largely found in a few concentrations of population, leaving large areas thinly populated and poor. These remarks will throw light on the per cents. of school moneys raised by state taxation and local taxation in the five divisions of states that the Census Office recognizes. The date is 1894-95. (See also *Appendix B*.) No account is here taken of income from other sources than taxation.

Divisions	State taxes	Local taxes
North Atlantic States	19.4	68.2
South Atlantic States	38.1	51.3
South Central States	48.4	31.7
North Central States	9.9	75.4
Western Division	23.0	61.3

In some of the states, as will be shown hereafter, local taxation must be more fully developed than in the past or present; in others, and these principal states too, the same may be said of state taxation.

2. In all states where, for other local purposes, the county is the sole unit of taxation, a liberal county tax should be levied for the schools. This proposition applies especially to those states where the county system of local government prevails. In states where, for such purposes, the county is a large unit of taxation, it may be wise to levy a county school tax; that circumstances must determine. This remark applies to the states having the mixed system of local government. Under the town system county taxation for schools would be out of harmony with the social and political traditions of the people, and could be accomplished only through a change of habit; perhaps this end is attainable. For the year 1894-95 the Commissioner of Education shows that 67 per cent. of the total school revenues of the country came from local taxes. The scale ran from 1.7 per cent. in North Carolina to 98.2 in Massachusetts. Unfortunately we have no statistics showing from what sources the local taxes come; how much from districts, towns, and counties respectively. The point must, however, be strongly pressed that local supply for public education should be forthcoming as well as state supply. It is a great mistake to teach the people to look altogether, or mainly, to the state treasury for school maintenance. They should rather be taught to depend in due measure upon themselves. It is the confident opinion of the subcommittee that some states are now committing this mistake. Many states having the county system of local government have in the counties a resource for school maintenance upon which they have never adequately drawn.

3. In those states where the town or township is a large taxing unit for other local purposes it should also be made to contribute liberally to public education. This recommendation it would be idle to urge in most of the southern and in some of the western states, because the civil town or township does not exist, and it would be vain to urge its creation for school purposes exclusively. But in those states where the town and mixed systems of local government exist a township school tax would be congruous with the general social and political habits of the people. The desirability of local taxation for school purposes was urged under the last head. Such taxation develops self-reliance and local character, and tends to awaken and keep alive the interest of the people in the schools. The town was the sole school-taxing unit in old New England, and it is still a prominent, sometimes almost an exclusive, one throughout the northern states. The local school taxes of New England are town and district taxes, and, taken together, they range from the minimum of 69.2 per cent. of the whole in Maine to 98.2 in Massachusetts. It can hardly be

doubted that the New England states, as well as some others, now throw the burden too heavily upon the towns and districts, and that they will find it advantageous considerably to raise the ratio which state taxation bears to local taxation. The other New England states will probably follow, sooner or later, the example of Maine, which raises nearly one-third of her school money by state taxation. In some states, no doubt, the townships should carry a heavier weight than at present, at least as compared with districts; at all events, the township should bear a reasonable part of the cost of its own education.

4. Special districts, as incorporated villages, towns, and cities, the subcommittee considers not only proper but necessary units of school taxation. Such districts are the concentrations, large or small, of population and wealth; they are the industrial and social centers of the country. We have already seen that, in 1893-94, \$69,886,413 was expended for school purposes in the 443 cities of the Union. In Massachusetts \$7,088,000 was expended in cities; in New York, \$12,723,000; in Pennsylvania, \$7,745,000; in Ohio, \$5,097,000; in Illinois, \$8,110,000. If we had the figures for the smaller cities and the incorporated towns, the aggregate would be much increased. Now, not only do the cities, taken together, raise by taxation nearly all of the school money that is expended in them, but, as will be shown in another place, many of them contribute largely to the support of rural schools. Again, they must in the future, collectively as before, contribute still more largely to this end. Special districts, then, are essential as taxing units, care being taken to secure approximately a fair distribution of the public burdens. As a rule, dwellers in cities are much better able to pay heavy taxes than dwellers in the country, but there is great reason to fear that they do not always do so.

The school district, in the commonly accepted sense of that term, is not a desirable taxing unit, but the contrary. It is now such a unit in a majority of states, and the subcommittee is decidedly of the opinion that it should either be made much less prominent than it is or be abolished altogether. As a rule, the second course is to be preferred (except in special districts already mentioned). The town or township is the smallest area that should be employed for this purpose. Even this may be overweighted, as can easily be shown. The unanswerable objections to district taxation are the inequality in burdens that results, and the inability of many districts to carry the load that good schools would necessarily impose upon them. A few statistics will make both propositions perfectly clear.

In 1871 Superintendent Fallows, of Wisconsin, published a table showing the amount of property assessed per scholar, in the school districts of a certain township, which he believed to be a type of the state of things generally existing throughout that state. The maximum was \$2,860; the

minimum, \$784; the average, \$1,378. In 1878 Superintendent Graham, of the same state, published a table for the whole state, showing that the valuation of property per district varied from \$2,300 to \$1,979,708. Districts with less than \$3,000 and districts with \$40,000 were found in the same township. But the poor districts were required by law to maintain a school six months in the year, just as the rich ones were. The ratio of district taxation ranged from half a mill to fifty-five mills on the dollar. Superintendent Wells, of Wisconsin, published similar facts in 1893 for a number of states. He showed that in Rhode Island some districts were taxed fourteen times as heavily as others, and in Connecticut a similar disproportion existed. In New York the ratio of tax raised in two counties varied from .0012 per cent. in one district to .0431 in another. One township presented the extremes .0009 and .0070, and still another one .0048 and .0371. Two districts in one township paid respectively \$5.66 and \$58.11 per capita; two in another one, \$5.43 and \$60.37; two in a third, \$11.25 and \$181.85. "That is to say," says Mr. Wells, "the rate of taxation is seven times as great in one district as in another in the same town, and the per-capita cost of educating a child is eleven times as great." But the first of these New York comparisons presents a ratio of almost forty to one.

Statistics such as these could be collected almost without limit. The most instructive way to study the subject is, so to speak, on the ground. If a man unfamiliar with it, who lives under the independent district system, will only take the trouble to collect the facts relating to his own county he may easily be astonished at the result. And yet, as a rule, the law lays upon the districts, rich and poor alike, the same burdens in respect to school maintenance. It is hard to see how or why the people have so long borne such inequalities—inequalities so contrary to the cherished American principle that the property of the state should educate the youth of the state; or, rather, it would be hard to see why they have borne them, if we did not know the extent of the public ignorance on the subject, and the strength of conservative habit, and did not see also how the district as a taxing unit is bound up in men's minds with the district as a unit of administration. But the two are not inseparable. The legislature of Ohio abolished the district as a taxing unit twenty-five years or more before it abolished the district as an administrative unit. In Connecticut, too, town taxes and district management are both met with in the same towns.

Before dismissing units of school taxation, a single point calls for closer attention. This is raised by the question: What is the advantage of looking to large units for supply rather than small ones?

The answer to this question rests upon the fundamental assumption

"Township-System of School Government." Madison, Wis., 1894.

that public education is a state function, and that the whole state is responsible for the education of all the youth of the state. Now, if the cost of public education bore the same ratio to the ability of the people to bear this cost in all the communities of the state, or, what is nearly the same thing, if the wealth per capita of all the communities were equal, then, as a matter of course, it would make no difference whether the school tax were levied upon large areas or small ones. But this is far from being the case. The cities are indeed concentrations of both absolute population and school population, as well as of wealth; but their wealth tends to increase much more rapidly than either the absolute or the school population. The fortunes of the country are either made in the cities or else tend to flow into the cities. The last report of the Census Office shows the per-capita wealth of the Union, of the states severally, and of the five groups of states, but it does not show the per-capita wealth of the cities and of the rural districts separately. The nearest approach to it is the tables showing the per-capita value of real estate with improvements, by states and counties. These averages throw important light upon the subject, and some examples will be given.

Illinois: state average, \$860.88; highest county average, \$1,311.90; lowest county average, \$164.64.

Massachusetts: state average, \$848.01; highest county average, \$1,564.10; lowest county average, \$466.65.

New York: state average, \$969.66; highest county average, \$1,733.35; lowest county average, \$305.80.

Ohio: state average, \$689.01; highest county average, \$1,562.56; lowest county average, \$265.99.

Pennsylvania: state average, \$719.13; highest county average, \$1,049.88; lowest county average, \$187.26.

If personal property were included, the extremes per capita would be still more widely separated than they are at present. Formal argument is not needed to show that the rich counties are much more able to contribute to the expense of government, education included, than the poor ones, and the proposition that a due proportion of such expense should be thrown upon these units rests upon this fact. The tendency would be to remove inequalities in bearing the common burden. Levying the local school tax upon the township instead of the districts that compose it, or upon the county instead of the townships, would work in this direction. It is very true that townships are unequal in per-capita wealth as well as districts, and counties as well as townships; still the fact remains that large units are less unequal than small ones. Every step towards the highest taxing unit tends to distribute the burden more equally. In fact, the argument for removing a portion of the burden from the small taxing units to the large ones is the same that justifies us

in calling upon society to educate individuals or families that are too poor to provide for their own education. Why do we impose a public tax for educational purposes at all? Simply because education is a common interest, while some individuals or families are unable to educate themselves.

It may be said that the line of reasoning which has been followed would lead to placing the whole burden of state education at the door of the state treasury. Why should not the state defray the cost of the common schools, just as it defrays the cost of the reform schools for boys and girls, and of the asylums and hospitals? It must be confessed that this would be strict logic. However, we are to remember that governments are never carried on according to strict logic, and cannot be from the very nature of the case. What is more, there are the best of reasons, as shown above, for making education, to a reasonable degree, a local charge—reasons that do not apply to some other public services. The people are more likely to be vitally interested in the schools if a portion of their cost is derived from local taxes. In no country of the world, so far as the subcommittee is aware, is elementary education made an exclusive general charge. It is not desirable that it should be. The present contention is for a reasonable distribution among the several taxing units. At the same time, it may be worth observing that in some countries there is a strong tendency, as in England and France, to rely more than formerly upon general rather than local supply.

The appropriations for schools that states make from the common treasury differ greatly in form as well as in amount. Massachusetts levies no state school tax, but the legislature nevertheless votes various specific appropriations, as for the salaries and expenses of state agents, aid to pupils of normal schools, compensation of local superintendents, the payment of high-school tuition for pupils living in towns whose valuation of property does not exceed \$500,000 and that do not maintain a high school. Connecticut raises annually a state school tax equal in amount to \$1.50 multiplied by the number of persons in the state between the ages of four and sixteen, as enumerated annually. Rhode Island, while not levying a state school tax, so-called, votes enough money out of the state treasury, each year, to make, with the income of the permanent fund, a total of \$120,000. New York raises annually, by taxation based on the real and personal property of the state, such sum for the support of schools as the legislature shall determine. New Jersey assesses and collects a total state tax amounting to \$5 for each person in the state between the ages of five and eighteen years. It is this tax that places New Jersey at the head of the column of northern states in respect to the per cent. of school revenue derived from a state tax. The constitution of Pennsylvania provides that the state legislature shall appropriate every

year \$1,000,000 from the state treasury for the use of schools, but the present appropriation is \$5,500,000. Ohio levies a tax of one mill on the dollar of the grand tax duplicate of the state. Indiana raises eleven cents, and Kentucky twenty-two cents, on each \$100 of taxable property. The Michigan law directs the supervisor of every township to levy a school tax of one mill on the dollar for schools within the township, but as the proceeds are kept within the districts where they are raised, this is only a compulsory local tax; still it stimulates further local taxation for the grand object. The legislature of Michigan also levies a specific tax on certain corporations, as railroads, etc., which is first applied to the payment of the interest on the various educational funds that the state has borrowed, as the university, agricultural college, and common-school funds, and then to the support of the common schools. Nebraska makes an annual levy and assessment not exceeding one and a half mills on each dollar's valuation on the grand list of taxable property. The California system of school finance will be mentioned under distribution and in an appendix. These are a few of the states; still others will be dealt with in connection with distribution.

The basis of school taxation, or the ultimate sources of school supply, is an important subject. Whether more money can be had for the schools often depends upon the manner in which it is proposed to levy the tax. In general, taxation for schools will conform more or less closely to the character of the state taxing system as a whole. While admitting the great importance of the subject, the subcommittee does not feel called upon to discuss it beyond offering brief remarks on two or three points.

Pennsylvania meets her annual state school appropriation, in whole or part, by laying a tax of four mills on the dollar on all moneys loaned by citizens of the state. Some states levy poll taxes, and some "occupation" taxes, for their schools. Quite miscellaneous sources of school revenue are met with in the state constitutions and laws. We find specific taxes on dogs, and on banks, railroads, and other corporations. Escheats and forfeitures are often, or commonly, devoted to the schools. The constitution of Nebraska prescribes that all fines, penalties, and licenses arising under the general laws of the state shall belong, and be paid over, to the counties where such fines, etc., may be levied or imposed; also that all fines, penalties, and licenses arising under the rules, by-laws, or ordinances of cities, villages, towns, precincts, or other municipal divisions less than a county, shall be paid over to the same respectively; and further, that all these moneys shall be appropriated exclusively to the use and support of common schools in the respective divisions where the same may accrue. Nor is Nebraska peculiar in so dedicating such funds. It has been suggested to the subcommittee that an inheritance

tax would prove a popular, as well as an abundant, source of school supply.

DISTRIBUTION.

The subject of distribution is only less important than that of income. It is easy so to distribute school funds as, first, either to defeat, in whole or part, the very end sought in taxing the larger units for the benefit of the small ones; or, secondly, materially to weaken local enterprise and liberality, or wholly to destroy it. The subject will be considered under both these aspects.

1. The assistance that the large political and social units render to the small ones, as the state to counties, townships, and districts; or the county to townships and districts; or the township to districts, should be made contingent, in part at least, upon what the small units do for themselves. No community, it is believed, is so poor that it cannot do something towards educating its youth. Again, a state educational system should be so organized and administered as to stimulate, and not repress, local spirit and effort. It is a great mistake to remove the burdens of public education so far from the people that they forget, or tend to forget, their existence. The principle here involved is a vital one. History shows conclusively that popular education has flourished most in those states of our Union where government is most democratic.

It is difficult, or rather impossible, to lay down a general rule that shall govern the division of taxation between the state and the local communities. Two things are to be considered. One is the political institutions that exist in the state. If government is largely centralized at state capitals and county seats—*that* is one thing; if it is largely decentralized, as where the principle of local self-government is fully developed—*that* is quite another. For example, it would be idle to expect that the same results would obtain in the southern states that are found in New England, or even in that great group of states where the mixed system of local government prevails. The governmental machinery and the traditions of the people *will* assert themselves in such matters. The other factors to be considered are social, and particularly economical conditions. As remarked early in this report, where wealth is abundant and its distribution general and somewhat equal in different communities, school burdens may be thrown, and should be thrown, much more heavily upon localities than where the opposite conditions prevail. Density of population, relation of urban to rural population, average wealth per capita, ratio of wealth-producing population to the population of legal school age, the expenditure for education per pupil and per capita, and the per cent. of school revenue derived from state taxes and local taxes in the different states—are peculiarly interesting when studied together

(*Appendix A*). North Carolina shows the largest per cent. of state school tax (that is, of the whole tax) of any state in the Union, while the average population per square mile and the average wealth per capita are also small. Maine surpasses all the other New England states in these particulars. The proportionally high ratio of state taxation in the South is due to the two facts stated—political institutions and economical conditions. But there can be no manner of doubt that, as the cities of the South grow, towns multiply, and concentrations of population increase in number and in the value of property, local school taxation will materially increase. Legislatures could hardly prevent it if they should try, and it would be most unwise for them to try to do so.

2. Funds raised by the large taxing units should be distributed in such a manner as to bring the support of the rich and strong to the poor and weak. The only reason for taxing these units at all for general purposes is to secure this end. On no other principle can a state school tax, or even a county or township tax, be defended, unless indeed the county or township is a single school district. The practical question is: How shall such funds be distributed so as not to defeat the end in view? A historical account of the leading methods actually pursued will help on the inquiry.

The public-land states may be divided into two classes. From the admission of Ohio to that of Arkansas (1803–36) Congress gave to the congressional townships of such states, severally, 640 acres of land each for the perpetual use of schools, and vested the title in the state legislatures. Accordingly, in these states every township has its own independent permanent school fund,¹ which is sometimes managed by local authorities and is sometimes in the keeping of the state. Generally speaking, the sum of the township funds makes the so-called state school fund, so far as it is derived from public lands. If the township-unit system prevails, the ultimate distribution of income has been made in advance; if the district system, then the township distributes to the districts. From the admission of Michigan to that of Utah (1837–95) Congress gave the common-school lands to the states as units rather than to townships, which resulted in the establishment of consolidated state school funds. The annual income from these funds, so far as the subcommittee is informed, is uniformly distributed to the local school organizations on the basis of the youth of legal school age as enumerated every year. The ages vary, but the principle does not change. It should be added that since the admission of California, 1,280 acres of common-school lands have been given to every congressional township.

The rule of apportionment just explained is followed far more generally than any other. Thus, Maine distributes her state funds, from whatever

¹ Ohio and possibly other states offer some minor exceptions.

source derived, to the towns according to the number of children between the ages of four and twenty-one. Connecticut distributes the annual income of her permanent fund, and the proceeds of the tax of \$1.50 for every child between the ages of four and sixteen, according to the number of children between those ages. Pennsylvania apportions her state tax of \$5,500,000 annually, Ohio the proceeds of her one-mill tax, Michigan so much of her specific tax as goes to schools, and Indiana and Kentucky the proceeds of their state school taxes, according to the same general rule.

But other rules are followed. Vermont apportions her state tax to the towns, cities, and unorganized districts according to the number of legal schools maintained during the preceding school year. New Hampshire distributes her state funds to the towns according to the number of pupils returned as attending school not less than two weeks in the year. So much of the Massachusetts permanent fund as goes directly to the schools is apportioned to the towns of the state that have a property valuation of less than \$3,000,000, towns ranking above that line receiving nothing. Furthermore, the scale is so adjusted that the poorer the town, the larger the amount that it receives. Towns whose valuation does not exceed \$500,000 receive \$275 each; those exceeding \$500,000 and not exceeding \$1,000,000 receive \$200; those exceeding \$1,000,000 and not exceeding \$2,000,000, \$100, and those above the last amount and not above \$3,000,000, \$50. Again, a portion of the state fund is divided among the towns that are eligible on the basis of the ratio that the town's school tax bears to the whole town tax; the larger the ratio the more help it receives. Rhode Island distributes her annual state contribution of \$120,000 as follows: first, \$100 is assigned to every school, not exceeding fifteen in number, in a township; then the remainder is distributed to the towns proportionally to the number of children from five to fifteen years of age, inclusive.

The state school moneys of New York are apportioned in a complicated manner. The state superintendent first sets aside the annual salaries of the school commissioners (district superintendents). Next he sets apart to every city, incorporated village having a population of 5,000 and upwards, and every union free-school district having a like population, which employ a competent superintendent of schools, \$800; and to cities having more than one member of assembly in the state legislature, \$500 for each additional member, to be expended according to law for the support of the public schools. He then sets apart any money that may have been appropriated by the legislature for library purposes, and \$6,000 for a contingent fund. Next he sets aside to the Indians on reservations, for their schools, a sum equal to their proportion of the state school money, on the basis of distribution established by law. These sums set aside, the remainder of the state moneys is divided into two equal parts. The super-

intendent now apportions to every district in the state \$100 (called a "distributive portion" or "district quota"), provided it has maintained a school, taught by a single qualified teacher or succession of such teachers for the legal term of the preceding school year; and the same sum for every additional qualified teacher or succession of such teachers, not counting monitors. The school year is 160 days, not including holidays that occur during the time, or Saturdays. This apportionment made, the superintendent divides the remainder of the school moneys among the counties according to their respective population as determined by the last preceding United States census, excluding Indians on reservations. But cities that have special school laws receive their due share separate and apart from the remainder of the counties in which they are situated.

The New Jersey state school tax, equal to \$5 for each child in the state between the ages of five and eighteen, is raised by the several counties according to their amounts of taxable property respectively, as shown by the tax rolls of the townships and wards of the counties. Ten per cent. of this tax, when it is paid into the treasury, is known as a *reserve fund*, and is apportioned among the counties by the state board of education "equitably and justly, according to their own discretion." The 90 per cent. remaining is then divided among the counties in the proportion that they have contributed to the tax. When the state school moneys reach the counties they, together with all other school funds in the custody of the county, are distributed to the townships and cities on the following basis: (1) \$200 for each teacher employed in the public schools for the full term for which the schools are maintained during the year next preceding (nine months); (2) the remainder according to the last published school census (children from five to eighteen years of age), *provided*, that no district shall receive less than \$275, and that districts with fifty five children or more shall not receive less than \$375. If these funds are not sufficient to maintain a free school nine months in the year, then the inhabitants may raise by a district tax such additional amount as is needed for that purpose.

The local one-mill tax levied by Minnesota is expended within the districts where it is raised. It is, therefore, only a compulsory district tax, the same as in Michigan. The current school fund of the same state, which includes the income of the permanent fund, is distributed on the basis of the number of pupils who have attended school forty days or more in districts that have had school for five months or more during the year. In addition to the above apportionment, graded schools having not less than three departments, which come up to certain requirements, receive aid from the state to the amount of \$200 each. Besides, there are eighty-five high schools that receive state aid to the amount of \$400 each. The grants to these graded schools and high schools are paid from

permanent appropriations that are met by general taxation, and are apportioned by the state high-school board, on evidence that the schools are complying with the requirements. Minnesota also gives the sum of \$500 annually to state high schools providing elementary normal instruction of a kind that satisfies the high-school board. Wisconsin also has an approved high-school list, one-half the cost of maintaining these schools being paid from the state treasury. Moreover, Wisconsin pays \$250 each to certain approved high schools in which manual training is taught.

The California system of school finance is a unique system. The state superintendent apportions to the counties the state school fund according to their respective numbers of school-census children (from five to seventeen, certain classes being excluded). Each county superintendent first ascertains the number of teachers every district in the county is entitled to on the basis of one teacher for every seventy school-census children, or fraction thereof not less than twenty, as shown by the next preceding school census, and then the number to which the county is entitled by adding these district numbers together. He then calculates the amount of money to be raised at the legal rate of \$500 a teacher. From this amount he deducts the quota of the state fund assigned to the county, and the remainder is the minimum amount of the county school fund to be raised by taxation for the ensuing year, *provided*: that the minimum of such fund shall not be less than \$6 for every census child. The county fund thus made up is then distributed to the districts in accordance with this rule, *viz.*, \$500 for every teacher, except (1) that to districts having less than twenty census children only \$400 is assigned, and (2) that to districts having more than seventy census children \$20 additional for every such child less than twenty in number shall be allowed. All school moneys remaining in the treasury after this apportionment has been made are then divided among the districts of the county in proportion to the average daily attendance upon each district during the preceding school year. District taxes may also be raised, subject to certain legal conditions (*Appendix C*).

The subcommittee does not feel called upon to deal with all the states, or even with all the peculiar modes of distributing school moneys. It believes that the enumeration of particulars now made is ample for the present purpose. Some remarks upon the leading rules or methods of distribution are, however, called for.

1. Distribution according to the school census or enumeration is open to a serious objection, *viz.*, it does not carry the money where it is most needed. For example, two districts lie side by side, one having twenty and the other forty youths of school age; the second district draws twice as much money as the other, but the cost of keeping up the two schools is practically the same. The same would be true of two township units,

unless the schools were consolidated. The result is that the district or township that needs the most help receives the least. The rule is simple and easily worked, but it tends partially to defeat the end of state or county aid.

2. The same objection holds against rules based on the school enrollment or on attendance, only with somewhat diminished force. Again, if the enrollment is followed, or attendance for a brief time, there is danger that some children will go to school long enough to be counted, and then drop out. Besides, such rules of distribution work in favor of the graded schools and against the rural schools, on account of their larger enrollment and more regular attendance.

3. Taking everything into account, the subcommittee is inclined to think that a fixed sum or sums, based on an arbitrary unit or units, is most equitable. Examples of such rules are furnished by the states of Massachusetts, Rhode Island, New York, New Jersey, and California. The most serious objection to such rules is that they are necessarily complicated; some of those given above are quite complicated. Then, if the fixed sum is so much a teacher, as in New York, or so much a district, as in Rhode Island and New Jersey, there is a temptation to the undue multiplication of schools or teachers. But this point can be safeguarded by fixing statutory limitations, as in California. No rule can be devised that will not be open to objection. The subcommittee does not believe it possible to invent any rule of distribution that will well accomplish the purpose of taxing large units for the benefit of small ones, unless it rests on the school or the teacher as a unit, with the necessary qualifications. The Massachusetts rule is open to the objection that the school needs of towns cannot always be measured by low valuations of property assessed for taxation, as the number of pupils to be educated is also a factor. If the method of distribution now recommended is objected to as an exclusive one, then it may be supplemented by basing a part of the appropriation on the school census, enrollment, or attendance. The resort to the United States census is most objectionable, as great changes of population occur in the course of ten years.

The difference in the working of the school-census method and the fixed-sum method of distribution is well shown by comparing the statistics of two states. For the fiscal year ending November 15, 1895, the mill tax of Ohio produced \$1,720,922. Of the eighty-eight counties forty paid more into the fund than they received from it, while forty-eight paid less than they received. Some of the major counties of the state received more from the fund than they paid into it, while minor counties paid more than they received. For the year 1896 the city of Cleveland actually received \$2,616.67 more from the state than it paid to the state. Assuredly, a rule that makes the agricultural counties of Ohio, or many of

them, contribute to the education of Cleveland, the most populous city in the state, is a travesty of common sense. But the same year Cincinnati paid in round numbers \$70,000 more than it received. This is hardly better than repealing the mill tax outright, and letting the burden of education fall directly upon the cities and townships. On the other hand, the state of New York, in 1896, paid a total general school tax of \$4,062,903, of which \$3,500,000 was immediately distributed to the counties again. Fifty-four of the sixty counties received more from this tax than they contributed to it; only six counties paid more than they received. Erie county paid \$241,597 and received \$185,460; while the corresponding figures for Kings and New York counties were \$503,603 and \$387,879, and \$1,884,584 and \$636,133, respectively. The New York rule *does* bring the strong to the help of the weak.

A question arises in respect to separate funds for buildings, the payment of teachers, and incidental expenses. In the opinion of the subcommittee such division is desirable. The need of providing new buildings is often made an excuse by boards of education for keeping down the salaries of teachers. The triple fund would not indeed prevent such injustice, which makes teachers as such contribute to buildings, but it would *tend* in that direction. It is often stipulated in school laws that state funds apportioned to communities shall be wholly applied to the payment of teachers. This is a wholesome regulation. The cost of grounds, buildings, and incidental expenses should be met by local taxes or other local funds. Touching the division of the cost of public education, State Superintendent Stetson of Maine, in a private communication, thus defines the prospective policy of that state: "Local communities shall provide school lots and school buildings, and keep the same in repair. Two-thirds of the money raised for maintaining schools shall come from the state, and one-third from the local communities. The apportionment of the money to the several municipalities shall be upon the basis of average attendance. We shall also try to get a law prohibiting towns from receiving state aid, if they maintain schools having less than a certain average attendance." Such a law as this would serve to prevent the undue multiplication of districts, and would even work a certain measure of consolidation.

The distribution of taxes levied on railroads, telegraphs, long-distance telephone lines, express companies, and the like, is an important question. In some states, as New York, Texas, and Ohio, school taxes levied on railroads inure to the exclusive benefit of the districts or townships through which the tracks run, excluding any state tax that may be levied on such property. This rule the subcommittee regards as unjust. The location of railroads is determined largely by physical conditions, and the mere fact that a line happens to run through its territory, where

probably not a dollar of the stock or bonds is owned, is no reason why a district or township should profit thereby to the exclusion of other and less fortunate districts or townships. In Pennsylvania the taxes on railroads are paid into the state treasury and are distributed by the legislature along with other revenues, the public schools, normal schools, and colleges being included among the objects of the appropriation. California has a similar provision. The mode of distributing the Michigan specific tax has already been described. It is believed that such revenues as the foregoing should inure to the common benefit of the state; but what is here said, let it be remarked, in no way relates to pending controversies about the taxation of railroads or other similar property.

The Nebraska law contains one excellent feature that is worthy of mention. All public high schools in the state that, as determined by the State Department of Education, have a proper equipment of teachers, appliances, and course of study, are open to attendance by any person of school age residing outside the district who is a resident of the state and whose education cannot be profitably carried on in the public school of the district of his residence. Such pupil must have a certificate, signed by the county superintendent, that he has completed the common-school course prescribed by the state department for work below the high school. He must attend at the high school nearest to his residence or at a high school of approved grade in the county of his residence. Any school board that furnishes high-school instruction to such pupil is authorized to charge fifty cents a week for the time that he has been in attendance, and it is made the duty of the county board to pay all such bills out of the county school fund. Massachusetts and Ohio, and perhaps other states also, provide for educating qualified pupils in high schools in other places than those where they reside, provided there are no home schools for them to attend, and this without cost to themselves. As Massachusetts is the only state that makes the provision of high schools compulsory under any circumstances, it may be well to mention the principal features of the state law in regard to that subject. Every town having a population of 4,000 persons or 500 families is obliged to maintain a high school, the grade of the school depending somewhat upon the fact whether it has the larger or the smaller population. Pupils living in towns that are not required to maintain a high school can attend any neighboring high school that will receive them. In such cases the state pays the tuition of the pupil, provided the valuation of the town in which he resides does not exceed \$500,000; if the valuation does exceed that amount, the town pays the tuition. High-school tuition is, therefore, wholly free to every qualified pupil in the state.

ORGANIZATION.

The subcommittee is not here interested in the subject of school organization further than it relates to school maintenance. Its relations to teaching, supervision, and studies are topics belonging to other divisions of the general report. The statement and enforcement of two propositions will answer the present purpose..

I. The first proposition is that the township-unit system is far superior to the district system, and should be substituted, if practicable, for that system wherever it exists. The superiority of the town or township as an administrative unit is as great as its superiority as a taxing unit. The principal advantages are the following :

1. If the schools of a township are under a single board elected from the township at large, schoolhouses will far more likely be built where they are needed than under the other system.

2. Equality of school provision will be much more fully secured in respect to schoolhouses and grounds, length of school terms, and the ability and character of teachers.

3. The tendency will not be to multiply schools unduly, but to restrict their number, bringing together more scholars, and thus making better classification, grading, and teaching possible, and increasing the interest and enthusiasm of the pupils.

4. Better supervision can be secured. The county superintendent can deal more effectively and easily with one board in a township than with six, ten, or twelve ; while township and township-union supervision will be greatly promoted.

5. Simplicity and economy of administration will be facilitated, and the sense of official responsibility be enhanced.

6. The tendency will be to employ teachers for longer terms, and thereby to restrict, in a considerable degree, the evils that flow from frequent changes. On this point the statistics of Mr. Gass, presented in this report, may be mentioned.

7. The strifes and contentions between districts that are now not infrequent will be prevented.

8. Transfers of pupils from school to school will be made more easy.

9. The reason last to be mentioned is perhaps the strongest of all. The relations of the township-unit system to school consolidation have already been suggested. The township system does not necessitate such consolidation, although it is likely to work that way ; but consolidation is almost wholly dependent upon that system : schools *will not* be consolidated in great numbers if a plurality of district school boards have to do the work.

The subcommittee has stated that the adoption of the township-unit system *will be* followed by the reforms that have been mentioned. It is not,

indeed, meant that such will be the unvarying result; there will be exceptions—perhaps many exceptions—when the whole country is considered; but the tendency *will be* strong in the directions named, or such *will be* the general character of the result. Not only is this the suggestion of common sense, but it is the teaching of experience as well (*Appendix E*).

The town-unit school system was the ancient system of New England. The classic school law enacted by the General Court of Massachusetts in 1648 ordered that the towns should found schools on their reaching a certain number of householders, the teachers to be paid either by the parents of such children as resorted to them for instruction or by the inhabitants in general by way of supply, as those who ordered the prudentials of the town should appoint. The word "township" is also used in the law. Connecticut followed the example of Massachusetts. The original New England town, which was a small concentration of population, was well adapted to this system. But "as the population of each little nucleus of settlement spread itself out from the center of the original 'plantation,' it early became convenient, in Massachusetts and Connecticut at least, to allow neighboring families at a distance from the local concentration, or nucleus, to form themselves into a school district." The original church parishes were divided in the same way. If these districts had been founded merely for the purpose of school supply, or to regulate attendance, there would have been, under the conditions existing, no objection to their formation, but the contrary. Unfortunately, however, these new districts also became units of school maintenance, bodies corporate and politic. These districts appear at first to have existed by sufferance merely, but the celebrated school law of 1789 legalized them, thus paving the way for the general introduction of the new system. Horace Mann declared in his Tenth Annual Report: "I consider the law of 1789 . . . authorizing towns to divide themselves into districts the most unfortunate law on the subject of common schools ever enacted in the state." Still this "act was not repealed until manufacturing had restored those concentrations of population which in the early colonies had invited township control of school affairs." This was finally done. Mr. Mann in the same report (p. 37) bore this testimony to the superiority of the town system:

"As a general fact, the schools of undistricted towns are greatly superior to those in districted towns—and for obvious reasons. The first class of towns—the undistricted—provide all the schoolhouses, and, through the agency of the school committee, employ all the teachers. If one good schoolhouse is provided for any section of the town, all the other sections, having contributed their respective portions of the expense to erect the good house, will demand one equally good for themselves; and the equity of such a demand is so obvious that it cannot be resisted. If, on the other hand, each section were a separate district, and bound for

the whole expense of a new house if it should erect one, it would be tempted to continue an old house long after it had ceased to be comfortable, and, indeed, as experience has too often sadly proved, long after it has ceased to be tenable. So, too, in undistricted towns we never see the painful, anti-republican contrast of one school, in one section, kept all the year round by a teacher who receives \$100 a month, while, in another section of the same town, the school is kept on the minimum principle, both as to time and price, and, of course, yielding only a minimum amount of benefit—to say nothing of probable and irremediable evils that it may inflict. In regard to supervision, also, if the school committee is responsible for the condition of all the schools, it is constrained to visit all alike, to care for all alike, and, as far as possible, to aim in all at the production of equal results; because any partiality or favoritism will be rebuked at the ballot box. In undistricted towns, therefore, three grand conditions of a prosperous school, *viz.*, a good house, a good teacher, and vigilant superintendence, are secured by motives which do not operate, or operate to a very limited extent, in districted towns. Under the non-districting system it is obvious that each section of a town will demand at least an equal degree of accommodation in the house, of talent in the teacher, and of attention in the committee; and should any selfish feelings be indulged, it is some consolation to reflect that they, too, will be harnessed to the car of improvement."

The district system was at one time universal, and it exists in some form in a great majority of the states today. In Maine, New Hampshire, Massachusetts, and New Jersey it has been wholly swept away. In Connecticut and Rhode Island the town system is permissive, and exists side by side with the district system. The township system exists in Pennsylvania, Ohio, and Indiana. It is permissive in the upper peninsula of Michigan, in Wisconsin, and in Minnesota, and doubtless in other states. It varies somewhat in the organization of the local authority. The Massachusetts school committee consists of three members or a multiple of three, elected from the town at large. In New Jersey the board consists of three, five, or nine members, as the town may elect. The Ohio board consists of delegates or representatives elected by the sub-districts, one each. A single trustee elected by the people manages the schools of a township in Indiana, except that he is assisted by a director in each attendance district who looks after incidental local matters.

Considering the great superiority of the township system over the district system, it is not a little strange that its introduction in the room of its competitor should have been so steadily resisted as it has been. This opposition is due in part to the power of conservative habit, in part to the belief that the district system is more democratic, and in part to the

popular fondness for office holding, all conjoined with much misconception and ignorance in respect to the merits of the two systems. It has also been urged in favor of the district, by politicians, that it is the best unit for canvassing the states for political purposes. Certainly it cannot be objected to the township system, in its pure form, that it is not sufficiently democratic. In 1875 there were 15,087 teachers employed in teaching the common schools of Ohio, and there were in the state at the same time more than 35,000 school directors and members of boards of education charged with the administration of the schools. This, assuredly, is an excess of democracy.

The "community" system is much worse than the district system, and fortunately it is confined to a single state. The Texas law permits parents, guardians, or other persons having control of children of scholastic age, residing in any one of the so-called "community" counties (thirty-five in number out of a total of 250), to unite and organize themselves into a free-school community entitled to the benefits of the available school fund belonging to the county, upon complying with certain prescribed conditions. The persons so uniting and organizing first address a petition to the county judge, who is *ex-officio* county superintendent of schools, duly signed by the petitioners, setting forth that the community is white or black, as the case may be, giving an alphabetical list of the names of children of scholastic age within the limits proposed, describing the capacity of the schoolhouse and the character of the other conveniences that the petitioners have to offer, naming persons to act as trustees, etc. The matter then passes into the hands of the judge, who has no discretionary power in the premises. He may not even throw aside such a petition either because it is signed by few persons or because the alphabetical list carries few names. The law does not fix any minimum number in either case. If the people of a neighborhood desire a school, no matter how few they may be, a school the judge must grant them. The "community" is a voluntary district in the strict sense of the term, having legal existence for one year only, and having no authority to levy a local school tax, and the evils that attend it are far greater than those that call so loudly for the abolition of the district system wherever that is practicable. The people of Texas can, however, congratulate themselves that the "community" school, which plainly originated in pioneer society, has lost ground in later years.

In the South, and in those western states that have the county system of local government, the only practical alternative to the district system of school organization is a county system. It must be remembered that in these states the town or township does not exist. Fortunately, such a system is not altogether unknown. In a few counties of Georgia it has been in successful operation for a number of years. These are the prin-

cial features of the system as it exists in Richmond county, in which the city of Augusta is situated :

The county is the unit area of organization, and the rural parts and the urban parts of the county district, as far as practicable, are treated just alike. A board of education, composed of representatives elected by the people of the county for the term of three years, one-third retiring each year, manages all the schools. The school tax is levied at a uniform rate upon all the property of the county, without revision by any other authority and without any limit as to rate or amount. The county and state funds are distributed to the schools according to the number of children to be educated. There is no district tax. The same qualifications are required for country and for city teachers. The teachers are treated as nearly alike as the conditions admit, and they are paid about the same salaries. The schools are in session the same length of time in a year, nine calendar months. The country schoolhouses, on the average, are situated four miles apart, and no child is out of walking distance of a school open nine months in the year, and taught by a good teacher. One superintendent has charge of all the schools. Augusta has nine-tenths of the taxable property of the county, but only three-fourths of the school population. In other words, the rural parts of the county pay one-tenth of the school tax and receive the benefit of one-fourth of it. For the most part, these are excellent provisions. The county would seem to be the natural area unit for popular schools under the county system of local government. The subcommittee confidently believes that this mode of school organization has a great future before it in the United States (*Appendix D*).

II. In those parts of the country where existing physical and social conditions render it practicable there should be such a consolidation of rural schools as will diminish the existing number of schools, schoolhouses, and teachers, and bring together, at advantageous points, the pupils who are now divided and scattered among the isolated schools of the township or other similar district. This step should be taken in the interest of good education as well as of public economy. To make this reform possible the children, as far as may be necessary or practicable, must be conveyed to and from the schoolhouses at public expense.

How absolutely fatal to good schools the existing conditions are in many parts of the country statistics show most conclusively. State Superintendent Wells of Wisconsin reported in 1894 that his state had 183 districts whose average attendance the previous year was not more than five each ; that 858 others were not above ten each ; while 2,481 more did not exceed twenty each. "In other words," he said, "3,522 country districts, about three-fifths of the total number, have an average attendance not exceeding twenty, and about two-fifths above that average, with the great

majority near the lower margin.”¹ Mr. H. R. Gass, of Michigan, citing the state report for his authority, states in a published paper that in 1886 the country schools of Calhoun county in that state required 158 teachers, and that they employed 342 different ones in the course of the year. The average length of the school in the district was 8.4 months, while the average term for which the teachers were employed was but 3.8 months. He cites a second county that presents like statistics, and then observes: “The ratio of the number [of teachers] required to the number employed is about the same as this throughout the state, the tenure being longer in the newer than in the older counties.” This state of things Mr. Gass attributes to the prevalence of the district system. He refers to Massachusetts and Indiana, where changes of teachers are much less frequent and teachers’ tenures much longer than in Michigan. While two teachers on an average were employed in Michigan for a school every year, but few schools in the other states employed more than one. In the same state, at the present time, there are over 1,000 districts that enumerate less than twenty-five children of school age each, while seventy counties contain 468 districts that enumerate less than fifteen each. The statistics at hand do not show the actual size of the schools. Nor are the small schools found in the newer and poorer parts of the state only; the oldest and richest counties have their fair share of them. In fact, the newer parts of a state often have the largest and best schools. Not only so, the oldest and most densely populated states frequently make a very poor showing. In 1894-95 there were 7,529 school districts in New York, in each of which the average attendance upon school during the year varied from one to twenty pupils, while the average daily attendance in each of 2,983 districts was less than ten pupils (*Appendix I*). In 1893 Vermont had 153 schools of six pupils or less each. In 1892 State Superintendent Luce of Maine reported that the average enrollment in the schools of that state for the previous year was less than twenty-five pupils to a school, and that the number of districts having less than twenty-five was larger than the number having more. He declared that there were probably between 1,000 and 1,200 existing schools in the state whose enrollment was twelve or less, and that 600 or 800 schools then existing could be abolished without detriment.² Twenty-five years ago a large number of schools on the Western Reserve, Ohio, long famed for schools, had dwindled to the most insignificant size. Still other statistics of similar import will be found in the report of the Subcommittee on Instruction and Discipline. Attention is drawn particularly to those relating to Rhode Island and Massachusetts.

¹“The Township System of School Government.” Madison, 1894.

²Quoted by Mr. Gass. See “Transactions of the Michigan State Teachers’ Association, 1887.”

But it is needless to multiply statistics, or to insist at length that thousands of rural schools furnish their pupils with a miserable preparation for the duties of life. When we consider the various elements that enter into good education, and especially training for social activities, it is not too much to say that a very small school is almost necessarily a very poor school. The facts are notorious. Hitherto it has been supposed that, although the cities and towns surpassed the rural districts in higher education, the rural districts contained a smaller proportion of illiterate persons. This has been the prevailing view in the northern states, and probably it was once in accord with the facts. The cities have been considered the great hives of illiteracy. But there is now grave reason to question whether the fact is not often the other way. Certainly it is so in the only state where, so far as the subcommittee is informed, the subject has been statistically investigated.¹ But however this may be, a remedy for the unsatisfactory state of the rural schools is one of the pressing needs of the day. What can be done? One thing that can be done is to consolidate many of the small schools by carrying back and forth such pupils as need to be carried, and thus, by one stroke, create several of the conditions of good schools. The interest that this subject is beginning to awaken is one of the hopeful signs of the times.

It was Massachusetts that led the way in developing the district system, and it is Massachusetts that is leading the way in consolidation. An act that dates from 1869 authorizes any town in the commonwealth to raise money by taxation to enable the school committee, in its discretion, to provide for the conveyance of pupils to and from the public schools at public cost. The towns were already empowered to build schoolhouses wherever they were really needed. Availing themselves of these powers,

¹ The state referred to is Michigan. According to the state census of 1894 the ratios of the foreign-born persons in the cities of the state, ten years of age or more, unable to read and write, and in the state at large, were practically the same, eighty-four in 1,000. But the ratios of the native-born in the cities, in the state at large, and therefore in the country districts, were quite different. In the cities it was fourteen in 1,000; in the state at large, twenty-one in 1,000; in the country, twenty-four in 1,000. For every fourteen persons ten years of age or upwards in the cities unable to read and write there were twenty-four in the country; that is, the ratio in the country is 70 per cent. greater than that in the cities. If the country rate of illiteracy could be reduced to the city rate, the number of illiterates of the native-born population ten years of age and upwards unable to read and write would be reduced about 8,000. Several facts, no doubt, enter into the explanation of the greater illiteracy of the country districts, but the most important of them is the inferiority of the country schools. It does not explain matters to say that Michigan is comparatively a new state, that much of it is thinly settled, that it contains large lumbering and mining districts, etc. The fact is that in the oldest and wealthiest parts of Michigan the cities, as a rule, surpass the counties in which they are situated in respect to popular intelligence. The city of Detroit ranks distinctly higher than Wayne county, and the same may be said of the cities of Grand Rapids and Ann Arbor as compared with Kent and Washtenaw counties. The counties named contain the cities mentioned.

many towns have entered upon the work of consolidating their schools. How the work goes on is shown by the following table exhibiting the sums of money paid for public-school transportation for a series of years.

Year	Amount	Year	Amount
1888-89.....	\$22,118.38	1892-93.....	\$50,590.41
1889-90.....	24,145.12	1893-94.....	63,617.68
1890-91.....	30,648.68	1894-95.....	76,608.29
1891-92.....	38,726.07	1895-96.....	91,136.11

The movement has extended beyond Massachusetts and reached every one of the New England states. In these states many hundreds of schools have been consolidated, and with the most gratifying results. Occasionally an unsuccessful experiment is reported, but the great stream of testimony runs strongly the other way. Longer school terms, better teachers, better grading, better instruction, more interest in the pupils, greater physical comfort on the part of the children, better supervision—these are the claims that are made for the new departure (*Appendices E and F*). Other things being equal, the new way is never more expensive than the old one, and often it is less expensive.

The movement has spread beyond New England. In 1894 a law was enacted in New Jersey providing for the transportation of pupils at public expense in order that rural schools might be consolidated with city ones. A most interesting experiment in consolidation is being tried in northeastern Ohio, where some schools had already died out, and many more were lingering on the verge of death. Permissive legislation has been obtained in several counties, and already many townships are working the plan successfully, while many others are looking on expectantly and are apparently on the point of making the new departure. The newspapers are quick to note the innovation, and it is already attracting attention beyond the borders of the state (*Appendix F*).

The distinct pedagogical advantages of consolidation are much more fully set forth in the reports on supply of teachers and instruction and discipline than here. In this report the topic is dealt with mainly as it is related to organization and administration. The fact is, however, the several aspects of consolidation are inseparably connected. As a rule, whatever promotes simplicity and ease of administration promotes good instruction, and *vice versa*. No one of the subcommittees that handle the subject for a moment supposes that there is any charm in the word "consolidation" to cast all the evil spirits out of the rural school, but they all believe, after giving the subject mature consideration, that great possibilities of improvement lie in that direction. It is perfectly true that the consolidation remedy cannot be universally applied, because physical and

social conditions often forbid. The fact is that a large proportion of the children of the land will be schooled in little schools—rural schools, ungraded schools—or they will not be schooled at all. Suggestions looking to the improvement of these schools will be found in the reports of all the subcommittees; but insistence is here placed upon the fact that the consolidation remedy can be applied on a grand scale, with the largest promise of success. In most states some new legislation will be necessary to that end, but not in all. Wherever the township-unit system exists, the first step, and the long step, has already been taken. In such states it should not be difficult to secure the needed legislation in relation to transportation. State Superintendent Emery of Wisconsin has already notified the people of his state that the laws contain all the provisions that are necessary to enable them to move at once in the direction of school consolidation.

It is important that the consolidation reform shall not be misunderstood. It does not necessarily mean that there shall be only one school in a town or township. It does not mean either that parts of different townships or counties shall not be comprised in one school. These questions are merely matters of detail, and their adjustment will depend upon such factors as the size of townships, the distribution of villages or other local centers, the direction and condition of roads, streams, and bridges, the distribution of population, and the physical configuration of the township and the adjacent parts of the country.

It is noteworthy how the different phases of educational reform all tend to hold together. In the northern states the cause of school consolidation depends intimately upon the adoption of the township-unit system. A certain amount of consolidation can be effected by the abolition of small districts; it may be possible, also, for several independent districts to merge their schools into one, for the time at least, and still preserve their independence; but it is manifest that the first plan will not prove effectual, and that the second one will be infrequent and precarious. The subcommittee believes confidently, therefore, that the fortune of effectual consolidation is closely bound up with the fortune of the township-unit system.

It is also noteworthy, let it be remarked again, how different social elements tend to attract one another and so to coalesce. School consolidation, especially its practicability, turns largely upon means of cheap, safe, and easy communication throughout the school area. Here we touch a question intimately relating to social progress that has been receiving increasing attention the last few years. Reference is made to the improvement of roads. Those who have been promoting this movement have not probably regarded it as a measure of educational reform; but such it is. Perhaps there is no rural interest of a social nature that

would be more decidedly enhanced by good roads than the educational interest. The people of some of the towns of Ohio, where the new plan is being tried, claim this as a decided advantage that the drivers of the omnibuses serve as carriers for the mails between the farmhouses and the post offices, thus promoting the diffusion of intelligence in still another way.

Only a single point remains to be pressed, but it must be pressed strongly. This is the necessity of lengthening materially the time that the country schools, on the average, are in session each year, and the securing of a more regular attendance of the pupils. The legal years now vary widely in different states, and the practical, or real, years still more widely. Some communities always surpass the legal minimum of time, others as regularly fall below it. In the thickly settled states of the East the rural schools are in session eight, nine, or ten months in the year; but often in the South, and sometimes in the West, one-half the shortest of these terms is not reached. The legal year is frequently absurdly short. Until two years ago the Michigan year was but three months, and now it is but five months. It is quite unnecessary to argue that short schools are, even relatively, poor schools. In order to have a good school, it is necessary not only to bring pupils together in considerable numbers, but also to hold them to the work a certain number of hours each day, and a certain number of days each year. There must be a concentration of effort as of pupils. It is as wasteful a method of education to send children to school seventy or eighty days in the year as it is to send them two or three hours in the day. Persons interested in popular education, and particularly in rural education, should not rest, therefore, in their efforts until they have made the legal school year in every state at least 160 or 180 days.

But it will not be enough for the state simply to fix a minimum school year: it must see to the enforcement of the law. The law should hold communities to a rigid accountability in respect to maintaining schools of legal grade for the full legal period, to employing none but certificated teachers, and making all the required reports to the state educational department. Most school laws contain such provisions as these, but it is feared that they are not always enforced. The only practicable mode of enforcement is absolutely to withhold from the local organizations all aid from the superior taxing units, as the state, until they first observe the law.

And again, it will not suffice for the state to see that the prescribed quality of instruction is actually furnished. It might, perhaps, be thought that if the state only provided local schools, and made them free, the people would be only too glad to avail themselves of them to the full; but sad experience shows that this is not always the case. The

indifference, ignorance, and selfishness of some parents come between their children and the schools. In communities where the school attendance is compulsory some parents are in an almost constant battle with the authorities, to keep their children out of the school as much as possible. It is possible that such extreme indifference or selfishness as this is more common in cities than in the country; and yet it is true, as a rule, that the country child's labor, especially the farm boy's labor, has a greater money value than the city child's labor, and that the farmer is, therefore, under a special temptation to keep his boys out of school. On the whole, there is quite as much need of an efficient compulsory-attendance law in the country as in the city, and perhaps more.

The subcommittee has not taken space to discuss, in general, the common education that the American states are now furnishing the American people. That is a large subject, and for the most part lies outside the field of the present inquiry. It will suffice to say, on this large question, that the people had better pay what they do pay for what they get than to go without it, or even twice, thrice, or four times the sum; but, at the same time, they might receive, and should receive, a great deal more for their money than at present. This is particularly true of the rural schools. No doubt there are many excellent schools in the country; but, on the whole, it may well be doubted whether any money that is expended in the people's interest is expended more wastefully than what goes to the country schools. No doubt the country school has points of advantage over the city school, as the freer communion with nature, but, on the whole, it is inferior. The typical "little red school-house," so invested with sentiment, is a costly and unsatisfactory institution of education. Owing to social changes, in many parts of the country it is much less efficient and useful, at least relatively, than once it was, and a new organization is imperatively called for. Something should be done to stop the wasteful expenditure of the public money. State Superintendent Stetson, speaking for his state, puts the case thus in a communication to the subcommittee:

"I have devoted quite a number of pages in my report [1895] to showing the people of Maine that we are wasting an enormous sum of money in this state because of the unbusinesslike methods which are used in the expenditure of its school funds. This waste is made in every direction in which money is spent. We pay more than we need to for school lots, the erection of school buildings, the furnishing of school appliances, text-books, fuel, making repairs, etc., etc. The waste along these lines aggregates more than one-third of a million of dollars each year. I have shown in the report that the money which we spend for common schools is sufficient to maintain schools taught by professionally trained teachers, and superintended by competent superintendents; that,

in addition to doing these two important things, we would have money enough left to supply them with the appliances necessary for a successful school, and also furnish the needed apparatus, library books, and make all the needed repairs and additions. I feel that I have demonstrated this point so that there will be no further question about it in the state of Maine. The whole matter turns upon the simple point that we are alarmingly wasteful in our expenditure of school money.

"Personally I am in favor of local communities being responsible for providing school buildings. I think two-thirds of the funds required for the maintenance of the common schools should be furnished by the state, and that the other third should be raised by local taxation; that the state should examine all teachers and issue all licenses to teach; that towns thus receiving state aid must employ teachers who hold such certificates. The state should inspect the school accounts of the towns receiving state aid."

The subcommittee deems it advisable, now that the whole ground has been covered, to restate the fundamental propositions that have been urged in this report. These all start from the one central postulate that a provision of funds sufficient for their adequate support is essential to the existence and life of good schools. The threefold division of the subject will be preserved in the summary.

I. REVENUE.

1. The great resource of the public schools is, *and must continue to be*, some form or forms of public taxation.

2. Such areas or units of taxation should be created, or continued if already in existence, as will fully develop the sound American principle that the whole wealth of the state shall be made available for educating all the youth of the state.

3. To accomplish this end, resort must be had to the larger units of taxation, especially where population is sparse and wealth meager. The following recommendations must be specifically urged: (1) a liberal provision of funds from the state treasury; (2) a county tax in at least all the county-system states; (3) a town or township tax in the states where this civil division exists; (4) taxes in special districts, that is, in cities and villages. The school district, in the commonly accepted sense of that term, is not a desirable taxing unit, but quite the contrary, and should be abolished as such unit.

II. DISTRIBUTION.

1. Funds raised by the large political or social units for general school purposes should be distributed in such a way as to bring the rich and the strong to the help of the poor and the weak.

2. Such rules of distribution should be adopted as will accomplish

this end. In order to do this, distribution must be based, to a certain extent at least, upon fixed or arbitrary units; that is, so much money must be given to the school or to the teacher.

3. The large taxing units should render assistance to the small ones only upon the condition that the small ones first do something for themselves.

III. ORGANIZATION.

1. In the states where the town or mixed system of local government exists, the town- or township-school system should, as far as practicable, be substituted for the district system; in the county-system states the county-school system is the natural alternative to the district system.

2. In those parts of the country where existing physical and social conditions render it practicable there should be such a consolidation of rural schools as will diminish the existing number of schools, school-houses, and teachers, and bring together, at advantageous points, the pupils who are now divided and scattered among the isolated schools of the township or other similar districts.

3. There is urgent need of lengthening materially the time that the country schools, on the average, are in session each year. The ideal should be a minimum school year in every state of at least 160 or 180 days.

The subcommittee does not expect to see, and does not desire to see, the school systems of the country all brought to one uniform pattern. It is too well aware of the great diversity of conditions that exist to think such a thing is possible. Even more, a certain variety, and so conflict, of systems is conducive to life, activity, and improvement. Neither is the subcommittee under any illusions as to what is possible, or probable, in a field of education so vast as that offered by the United States, with the great number of authorities, state and local. At the same time there are certain general laws governing successful school systems and schools that cannot be ignored. Some of the principal of these laws have been set forth above; and it is believed that their general recognition will be followed by a marked improvement of the common schools, and so of the popular education, of the country.

Some persons may ask, "How shall the principles laid down in this report be made practical?" "How shall they be established in communities or states where they do not exist, or exist only in part?" To these questions only a general answer is needed. The state legislature, the law-making authority, is the only source of power in relation to education, as well as in relation to all other branches of the state government. Accordingly, if the school law is defective and weak, the legislature must be called upon to repair and strengthen it. No progress can be made with-

out an efficient law and efficient school authorities. But how shall the legislature be induced to act in the premises? In precisely the same way that it is induced to act in other matters. Facts, arguments, persuasion, must be addressed to the members of the legislature. Above all it is important that the public mind shall be informed as fully as possible upon all branches of the subject. If the people generally knew how much better schools they *might* have than those that they *do* now have, and for no more cost, it is impossible to believe that they would not bestir themselves to effect reforms. The subcommittee marks out what it believes to be broad lines of educational progress. It enforces its views, as far as possible, with appropriate arguments. But it must necessarily leave the application of these views and arguments to the exigencies existing in particular communities or states to such persons, belonging to these communities or states, as are interested in the subject and are familiar with all the local facts and conditions.

B. A. HINSDALE, *Chairman*,
W. S. SUTTON,
S. T. BLACK.

REPORT OF THE SUBCOMMITTEE ON SUPERVISION.

The Subcommittee on Supervision of Rural Schools has taken into careful consideration the various topics submitted for investigation. Its inquiries have extended into all the states and territories except Indian Territory and Alaska, and the facts are based on returns more or less full from all parts of the country.

Professional supervision is today regarded as an essential factor in our school system. It has been observed that the schools that are closely supervised by men who thoroughly know their business at once respond to the influence of this supervision. Expert supervision has resulted in systematic, orderly, and well-directed instruction. It is a matter of remark that the most competent superintendents have the best schools, and that cities noted for their excellence in school work have attained this pre-eminence through the medium of intelligent supervision. This is also true of those counties which have come under the same influence.

"There is no other agency in our school system that has done so much for the improvement of our schools in organization, and in methods of instruction and discipline, as the superintendency."

The attention of the profession, however, has been mainly directed toward expert supervision in city schools, and but little heed has been paid to the demand for such work in rural districts. It is quite time

that our inquiries should be directed toward the character of the supervision demanded by the country school. If supervision through a competent superintendent is a good thing for city schools, there is every reason why it would be a good thing for rural schools.

STATE SUPERINTENDENT.

Although the state superintendent stands at the head of the public-school system of the state, his work is more closely related to rural than to city schools. As this report has reference only to the conditions of rural schools, your subcommittee will consider the duties of this officer as bearing upon that part alone of the general school system. No officer connected with the administration of state affairs requires higher or more essential qualifications than that of superintendent of public instruction. He should be a man of high moral character, well acquainted with approved methods and with the history and condition of education in his state. He should be in close touch with the educational spirit of the times, and should be one whom the profession regards as authority in all that constitutes excellence in school matters. It is also agreed that he should be an experienced teacher, of broad and thorough scholarship, and a good public speaker. With these qualifications there should be combined a large share of good common sense, and sufficient executive ability to manage the details of his office.

The legal term of office in Massachusetts and Rhode Island is one year. In Connecticut it is at the pleasure of the state board. In twenty states the term of office is two years; in four states, three years; in seventeen states, four years; but in no state does it exceed four years. The average length of term of the state superintendent is two years and ten months. The lowest salary paid is \$1,000 and the highest \$5,000 per year. The average salary is \$2,475 per year. In answer to the question as to how much time the state superintendent devotes to supervision of schools, we had definite answers from thirty-seven states, in which we find that nineteen of these superintendents devote more than half of their time to visiting schools and traveling in the interest of education, and eighteen devote less than half their time. Quite a number of the state superintendents report that they divide their time equally between the office work and supervision. In only a few of the states does the state superintendent exercise no supervision, and in several the supervision is carried on through deputies or agents.

The state superintendent under present arrangements has but little time for personal inspection of school work. The superintendents in fourteen states visit each county once a year and in eight states once every two years. From the other states no definite information could be obtained. Many superintendents say, as often as practicable; in some

instances, not at all. Our information is to the effect that most of the state superintendents devote as much time to supervision as they can spare, but that it is generally considered secondary to work of a clerical nature. There are undoubtedly in some states sections which have never been visited by the state superintendent or his deputy.

By some means the influence of the state superintendent should be extended until it reaches every rural school in the state. In all possible ways the office should be made useful to the teachers and school officers. The rural schools need this stimulating, helpful influence more even than those of the city. While in most states the office has but little more than advisory powers, yet, through lectures at associations and through the inspection of institutes, the state superintendent ought to be able to convince the teachers of rural schools that he is in close sympathy with their work.

The work of the state superintendent ought to be made more effective by so increasing his clerical force as to enable him to spend more time in direct contact with the schools and school officials of the state. The careful compilation of statistics is very important, but it can be intrusted to a skillful statistician, while much of the routine work of the office can be well done by clerks. The higher and by far the more important work of directing educational movements, of instructing the people, and of creating public opinion and arousing public interest devolves upon the state superintendent. There is a general demand for more assistance in his office, longer tenure of service, and more liberal financial support. His work should be so related to that of the superintendents in the various subdivisions of the state for school purposes that the whole may be properly articulated, and the county or town superintendents be under his direction and control. He should come in frequent contact with them by conventions held for the purpose of instructing them in their particular duties, and should send them such circulars and letters as may be necessary to aid and direct them in their work.

The state superintendent should have the power to withhold the state appropriation from all counties or school districts not complying with the law in every particular, because he would then hold the key to the situation and could enforce his orders.

The main duties of the state superintendent are not only to organize and direct educational influence and laws already existing, but also to go among the people in the spirit of Horace Mann, and, by public addresses, by the liberal use of the press, and by securing the assistance of the leading men of the state, to arouse and keep alive an interest in the cause of popular education. In connection with the rural schools especially the state superintendent not only has great possibilities for a wise supervisory influence, but also great opportunities to arouse and instruct the people.

In a majority of the states the most needful legislation is that which bears upon the organization and maintenance of rural schools, and a supply of competent teachers for the same. The state superintendent, therefore, should be a man able to secure the co-operation of the legislature for the enactment of proper statutes. This can be done only by one who sees clearly the great needs of the school system, and who is able to go before the people and the legislature and unite all influences to obtain the necessary legislation. While putting into this high office any person solely through his political affiliations is to be deprecated, the state superintendent should be a man who knows how to approach the leaders of all parties and convince them of the justice and soundness of his plans, viewed from the high vantage ground of the general good.

COUNTY, TOWNSHIP, OR DISTRICT, SUPERINTENDENT.

A still more important question opened for discussion is the character and degree of supervision below that of the state superintendent.¹ Thirty-eight states, mainly in the South and West, have county superintendents, whose duty it is to visit the schools and exercise the duties usually belonging to their office. The New England states generally have what is known as township or district supervision, which arises in large part from their political organization. In New England the town is the dominant political unit, while in the South and West it is the county. The simplicity and effectiveness of supervision are promoted when the units of political organization and of school administration are identical. This condition has its limitations, however, in the amount of territory to be covered and in the density of population, which is a varying quantity. The main point is to bring every rural school of the country as far as possible under the watchful care of a competent supervising officer. Responsibility is a strong stimulant. It is one of the weak points in our present system that too often the rural school-teacher is responsible to no one.

In regard to the operation of the two principal methods of supervision there is no reason why any section should abandon the practice which has been found best adapted to its peculiar conditions. It must be conceded, however, that a single township, containing on an average ten or twelve schools, is too small a territory to engage profitably the entire attention of one person. In such a case one of two things must necessarily happen: either the schools are supervised to the point of interference, or the supervision becomes uncertain, feeble, and unsatisfactory. In a general way, the rural township is too small a supervisory unit. Wherever it has been tried the supervisor has generally had some other busi-

¹ In this report the term supervisor is used to include also county superintendent, commissioner, or any other term by which the supervising officer of a county or supervisory district is usually designated.

ness to attend to, and thus his work has been found wanting in those results which are most desirable. In order that the work of overseeing and directing may be effective, it must engage the entire time and the best thought of the supervisory officer.

A proper remedy for this is the combination of towns for supervisory purposes. Three, four, or five towns could be united in one supervisory district, until a sufficient number of schools have been secured to engage the entire attention of one good man. The burden of his salary could be borne by these towns in the proportion of the number of schools they contribute to his work. This plan is in operation in Massachusetts, and has been satisfactory. A complete exposition of the Massachusetts plan of supervision of township schools is found in A. W. Edson's monograph, "Supervision of Schools in Massachusetts" (Boston, 1895).

In that state 253 of the towns are supervised by 155 supervisors. While some of the large towns can alone support a supervisor, several of the smaller ones must unite to secure the services of an efficient officer. In addition to what the towns do for themselves the state grants to those of low valuation, when they combine into a supervisory district, the sum of \$750 to pay for a supervisor. These towns, however, are required to raise an additional sum equal to that furnished by the state, thus insuring a sufficient sum for the employment of an expert school man. By these means 93 per cent. of the children of Massachusetts have been brought under close supervision. The salary paid to a supervisor is at least \$1,500 a year, and he is enabled to devote all his time to the work and to inspect each school once a month. It is true that there are still about 100 towns in Massachusetts without supervision, yet the feasibility of co-operative supervision with aid from the state is proven beyond all doubt.

"The state aid to a district amounts at present to \$1,250—\$750 towards the superintendent's salary and \$500 towards the salaries of the teachers. The remainder of the superintendent's salary, \$750, must be raised by the towns of the district. They are at liberty, of course, to raise more than \$750 for the purpose, if they desire to do so" (Massachusetts State Report, 1895).

What has been said regarding the combination of towns for supervisory purposes can be repeated with equal emphasis as to other small divisions of territory termed "school districts." The same principle applies here as elsewhere, that the interests of the schools included in a given territory should be sufficient to warrant the employment of a thoroughly competent person, at such a salary as would justify devoting his entire time to his work. After all has been done, there will still be vast sections of country, especially in the West and Southwest, without any means of efficient supervision. No present remedy can be devised to aid them. It can be safely left for the several states, as population increases,

to look after the interests of the schools in the light of the experience of older communities about them.

The worth of the county superintendency is acknowledged, but in many cases the county is too large an area and contains too many teachers for one man to properly supervise. The county is as much too large a unit for supervisory purposes as the township is too small. This remark, however, does not apply to every county nor to any one state. In counties where the number of teachers is too large for one man to supervise the county superintendent should have one or more assistants or deputies to aid him in his work. They should be directly responsible to him for the kind and character of their work, and should be charged solely with supervisory duties. The importance of having one superintendent for the county or district to whom other supervisors are responsible must be emphasized, as it would be an error and a fruitful source of strife if in any territory there should be two or more supervisors having concurrent jurisdiction.

THE COUNTY UNIT.

Since this report is a symposium of suggestions for supervising rural schools, it may not be amiss to discuss a plan of supervisory organization that has found favor in some few counties that contain large cities as well as a rural population. We mention it here because it has valuable features for supervising the rural schools. There is but one school board for the entire county. One set of men legislates for the whole area, and it is their duty to relate the urban and suburban and rural schools into a sympathetic system. This is based upon the idea that every city is bound to respect the people that immediately environ it. It is to the interest of a large city to have good roads leading to it, good crops in the fields around it, and good schools to which the farmers may send their children.

With this as a foundation principle there is but one school fund for the entire county, raised by taxation upon all property in the county, whether it be in or out of the city. This makes the general school fund, which is distributed upon the basis of school population and according to the needs of the city wards and the rural communities. The same qualification for teachers is required whether they teach in a city graded school or in a country ungraded school, and the same salary is paid to them and in the same way, and for just as long a term. In this system one superintendent is in charge of the whole area. He looks after a city graded school one day and the next day may be twenty miles away inspecting a country school. Expert supervision by a superintendent and his assistants is thus extended into the rural districts, and both city and country school receive the benefit of what there may be in each that is of real value.

Upon this plan, as a matter of course, a large portion of the school fund raised by taxation on city property is annually distributed to the country schools. The city is really made to assist in supporting the rural schools around it. And who shall say it is not a good thing for the city to do, especially in agricultural sections, in which the education, liberal and special, of the farmer's child is the probable salvation of the farming interests of the country. We should not lose sight of the truth that the farmer's child is to be made a useful citizen, not only content to stay in the home in which he was born and reared, if that is best, but fitted to fill honorably any station in life to which he may be called. To do this he must have all the opportunities of education and culture that the city affords. This can be brought about in no other way than at the city's expense, for wealth is massed in our populous centers. The expert supervision, the well-trained teacher, the long term, the modern textbook, the good schoolhouse, can be placed at the farmer's door by the agencies of the neighboring city, that owes him this and much more (*Appendix D*).

TRAINED TEACHERS NEEDED IN COUNTRY SCHOOLS.

Supervision is one of the vital needs of the rural schools, since most of their teachers are inexperienced. The number of normal-school graduates in rural schools is lamentably small. The reason is that the normal-school graduate can obtain a better salary by teaching in a larger field. The demand for this class of teachers makes their salaries so high that the country schools cannot afford to employ them. As soon as teachers become proficient by reason of experience acquired in rural schools, the probabilities are that they will be induced to seek better positions in cities, where their experience and abilities will command higher salaries.

Add to this the other fact that many young men begin to teach as a stepping stone to some other profession, and while they are teaching a country school are studying law or medicine, and their hearts are with that rather than with teaching; and also add that many young girls teach until they marry, or as long as they are compelled to teach, and no longer, that they have no real love for their work and no wish to stay in it, and we see how the problems multiply.

Rural schools suffer from lack of trained teachers. In them, as a general thing, are young graduates from the village high school, or some favorite among neighborhood families, or a type of ancient teacher whose placid life is not disturbed by the vexing problems of his profession. This raw material must be developed, made shapely, orderly, and systematic, if time is to be saved to the children, and schools properly supported. A bright and live supervisor will bring order out of confusion, harmony

out of discord, and will give life and beauty to that which before was inert and ungainly.

Teaching is a great art, based on a profound science. The supervisor is the expert who has given this art and science his careful attention, and whose business it is both to know how to teach and to show others the way of teaching. He can in some measure compensate for the lack of skilled work in the school by closely supervising and guiding inexperienced teachers and showing them what to do. An expert is one who possesses skill gained by practice. A supervisor who claims to be an expert should have experimental knowledge of "the how to teach." He is supposed to have given careful attention to those things which characterize a good school. Not only must he know how to teach, but he must know how to instruct others in the art and science of teaching. He must be a skilled teacher of teachers. Without this directing spirit, schools must necessarily suffer until teachers happen upon some better way. It is a great misfortune for schools to wait for wisdom in teaching until the many mistakes of teachers have pointed out better methods. The presence of skilled supervision has been the salvation of many schools.

It is one province of supervision in the country school to bring teachers into contact with each other, to illustrate better ways of teaching, to break up the isolation and monotony of rural school life, and to take to the doors and homes of people and teachers alike the life and freshness which have been the result of research and study on the part of the best minds in the profession. The province of supervision in rural schools falls far short of its legitimate purposes when it begins and ends in the schoolroom.

This point is not sufficiently well appreciated by those who have the oversight and care of schools scattered over a large tract of territory. Country schools have an environment of their own which should neither be forgotten nor ignored. The best supervisory work is that which brings into the rural school everything in farm and rural life which is strong and pure and wholesome. It is possible for the supervising officer so to exert his influence as to give grace and dignity to each individual school, and make it the rallying point for every good influence, a blessing to the entire community in which it is situated.

Attention is here called to the fact that in general but little care is taken in the selection of officers chosen to look after the interests of the rural schools. In the majority of states the county superintendents are elected by the people of the county without any regard to the preparation or qualifications they may have for the work. Very few states require the superintendents to have any special qualifications, and in many instances supervisors are put in charge of teachers who know more about teaching than they do, and are required to hold examina-

tions that they themselves could not pass. Add to this the fact that the superintendents are generally paid very small salaries (average \$828 for the whole country) or a meager *per diem*, and that many engage in other business and regard supervision of schools as an incidental matter, and it becomes apparent that professional supervision is too often the exception rather than the rule.

WORK OF SUPERVISORS.

We need everywhere trained superintendents of schools. "Supervision of schools should rank next in importance to the instruction in schools; indeed, so necessary to successful instruction is competent supervision that the two should receive together the watchful oversight of the state" (New Jersey State Report, 1894). Supervisors should know as much of teaching as the teachers under them, and should be able instinctively to distinguish good teachers by their manners, dress, speech, disposition, and character. The best work of a supervisor is his skill in selecting teachers. Not by the results of examination alone, for some learned people make poor instructors; not by yielding to the pressure of family or political influence, for this will ruin any system of schools; not by selecting his own friends or favorites, for this is unworthy of his office; but by following the knowledge that comes to him through study, by long experience, by careful observation, and by conscientious conviction, which enables him to know a teacher when he meets one, though he may not be able to tell why.

Teaching is a matter of both disposition and knowledge. The former cannot be examined, but it ought to be recognized; careful supervision will aid in developing it. Skill in doing this is an essential characteristic of a good supervising officer, especially in connection with rural schools. If the cry is raised (and it is) that there is not enough money to pay for professional supervision, the reply is that it would be wiser to have fewer teachers in order that those employed might be better qualified. A supervisor who is an expert can so arrange and organize the system that a less number of teachers can do the work and do it better, because each one is thoroughly competent. "A good superintendent earns many times his salary; a poor superintendent is too dear at any price. The work of supervision may be unsatisfactory either because the number of schools is too large for the oversight of one person, or because the supervising officer lacks the talent for moulding, inspiring, and directing the work of others" (Pennsylvania State Report, 1895). Underpaid supervision is often unskilled and inefficient, and against this we raise our decided protest. Such supervision is of no value whatever to the schools—a penny-wise policy that economizes in the wrong place. A supervisor should have no other business than to care for the schools. He should not be a mer-

chant, nor a lawyer, nor a farmer, nor an active teacher. His business should be to supervise the schools of his county, or township, or district, or whatever his area be called.

With a given sum of money for school purposes, to devote a part of it to skilled supervision will bring more children under enrollment, better teachers in the community, better instruction in the schools, and more satisfaction to the people, than if all the money were spent in paying the salaries of teachers.

In twenty-eight states the supervisors are required by law to visit each school twice a year, in the other states they are allowed to visit the schools as often as practicable. In one or two states the supervisors visit the schools very seldom. The length of time the supervisor spends in each school varies from fifteen minutes to one-half day. The time seems to depend very largely upon circumstances, the number of pupils, the character of the teacher, the efficiency and the pay of the supervisor. A skilled supervisor inspecting an intelligent teacher can do more service in fifteen minutes than an unskilled supervisor visiting a poor teacher can do in a whole day. The average time spent in the ordinary rural school by the school supervisor is about one hour every year.

In twelve states the supervisors devote all their time to the work. In these states the average salary is \$1,002 a year. In fourteen states the supervisors devote only a part of their time to supervision, with an average annual salary of \$408. Sixteen states report that in some counties the supervisors devote all their time to supervision, while in other counties the supervisors devote but a small part of their time to that work. In these states the salaries paid supervisors vary from \$100 to \$2,000 or \$3,000 a year. Where good salaries are paid they devote all their time to supervision. Where small salaries are paid they devote but little time to this special work. All states have some supervision, though it varies greatly in amount and in efficiency.

In many sections of the country a supervisor not capable of suggesting to teachers better methods of teaching and not able to detect false methods pays only a perfunctory visit to the schools. He merely sees whether the building is clean, whether the children look bright and interesting, whether the enrollment is good, such facts as would be noticed by any person of ordinary common sense. Too often the contact of the average supervisor and the teacher of the rural schools is nothing more than a mechanical business performance, with such elements of aid and encouragement as any intelligent visitor may give the school. Although this is not without advantage, it falls far below the standard of professional supervision.

How many teachers a supervisor can direct cannot be discussed except in a general way. Schools are more widely separated in some localities

than in others, roads are better, teachers are better, and supervisors vary greatly in the rapidity with which they work. As a general rule, however, every rural school ought to be visited at least once in two months. Supervision cannot be called close that does any less than that, and it would be better if the schools could be visited once every month.

No accurate information can be gained concerning the conditions of the school, nor can the proper influence be exerted over teacher and pupils, unless the supervisor has time at his disposal to make a reasonably thorough examination of the school and its surroundings. Sometimes, with an inexperienced teacher, he may find it necessary to spend the entire day in the school, while in other cases he may be able to visit two or more schools in one day. The point is that he must not feel compelled to shorten his visit, or to leave his work half done, in order to meet other engagements. To make his visits effective in the highest degree requires time and patience. The length of his visit must depend upon the necessities of the school, and of these he must be his own judge. An ideal system of supervision would give one supervisor from fifty to seventy-five teachers to supervise. Where the number of teachers is greater some will be neglected, for a supervisor generally has many interruptions in his work, such as rainy days, holidays, and the demand upon his time for office work, board meetings, committee meetings, public addresses, etc., so that it is impossible to put in every day in supervision. Allowance must be made for other important duties.

Attention is also called to the power which the supervisor can exert through rightly conducted teachers' meetings, institutes, associations, and round tables. Here he may meet the teachers under his direction, and make use of the information which he has gathered in visiting their schools. From free and open discussions by the teachers he will get an insight into their habits of thought and their methods of expression. Such meetings help break up the unsocial character of rural teachers by bringing them into contact, so that each learns something from the experience of all the others. In this way teachers and supervisors become better acquainted, gather fresh courage and new inspiration, and go home feeling that they have much in common, and that, if they will, they can in many ways be mutually helpful. The most deadening influence about the country school is its isolation. Nothing is more potent in overcoming this than frequent gatherings in which teachers, school officers, and parents freely discuss matters of common interest. To encourage such meetings is one of the duties incumbent upon the supervisor. Without being too prominent, he may still be the inspiring spirit, guiding, directing, and stimulating the tone and energies of all who participate in the proceedings (*Appendix P*).

LEGAL REQUIREMENTS AND QUALIFICATIONS.

The necessity of establishing some qualifications to be required of those who are to occupy the position of supervising officer is emphatically insisted upon.

"If it is desirable to insist upon a certain degree of qualification for a school-teacher in the humblest district of the state (this proposition has passed beyond the realm of discussion), it would seem that there is no question that the superior officer clothed by statute with such extended powers as a school commissioner ought to be a person possessing some fixed qualification for the performance of the duties of his office. The schools of the state will never reach that degree of efficiency which the state has a right to demand, and which is expected from the generous provision made for their support by the people, until this evil is corrected. Some standard of qualification should be insisted upon, and the power of removal in case of the election of a person not possessing these qualifications should be vested in the state superintendent" (New York State Report, 1895).

In only seventeen states are there any qualifications, beyond that of being a resident and a voter. In some states a first-grade license is required, in others a normal or university course, and again in others he must be an experienced teacher. In a majority of the states, however, the electors are allowed to choose any person without regard to educational qualifications.

In answer to circulars of inquiry the following information was obtained regarding supervisors:

Wisconsin—By the law of 1895, must hold a university, normal, state, or special superintendent certificate.

New York—No standard of qualification.

Pennsylvania—Must hold a college diploma, or a state or local certificate; must have at least three years' experience in teaching.

Michigan—Must be a graduate of a reputable college, university, or state normal college, or must hold a state or first-grade certificate.

Mississippi—Must hold a first-grade certificate.

Texas—Must be a person of educational attainments and hold a first-grade teacher's certificate.

Tennessee—Can be appointed only from applicants who pass an examination on questions sent out by state board.

Georgia—Must pass a satisfactory examination.

Louisiana—Must have a common-school education.

Montana—Must hold a first-grade certificate and have one year's experience as teacher.

South Carolina—Must be able to conduct a teachers' institute.

Kentucky—Must be able to obtain a first-class teacher's certificate, hold a state diploma, or state certificate.

Arkansas—Must have a first-grade certificate.

Maryland—The county school board may require applicants to be examined by the state superintendent.

Utah—Must have a valid certificate not lower than the grammar grade.

West Virginia—Must be skilled in the art of teaching.

Iowa—First-class certificate, good for two years, a state certificate, or a life diploma.

It is unquestionably true that a supervisor should be as well and as highly educated as the better teachers he supervises. He should be a man of broad and generous culture, a lover of good books, versed in the best literature of the day, one whose presence is an influence for good, and whose words are an inspiration. To require him to be in every case a graduate of some higher school would be unreasonable, perhaps, but he should be a friend of higher education in every sense of the word. He must for a long time continue to be one from whom will come the influence which will lead the pupils in the rural district to strive for the highest education possible under the circumstances. His influence should be given to the establishment of rural or township high schools wherever the population will permit it. These schools should include in their courses whatever is required, on the one hand, for entrance to the school of the next higher grade, or, on the other, those studies, a knowledge of which can be made so to change life on the farm, in its various forms, that it will become more attractive and more profitable. In the establishment and conduct of such schools the influence of the supervisor should be a very prominent factor.

A supervisor should have a thorough knowledge of school work. He should know what a teacher ought to do in managing a class of pupils of any age on any subject. This is one of the things he is paid to know. He should be an expert to whom teachers may go for advice and direction. If the advice is good and the direction wise, teachers will have confidence in the administration of the schools, and rely more and more upon the supervisor. The system is thus reduced to uniformity and becomes a source of strength. The supervisor should be able to direct teachers in their professional reading, and select wisely a library of teachers' books, and place them where they are most needed. He should know about school periodicals and be able to form his teachers into reading clubs and circles, and direct their studies. He should be able to arrange teachers' meetings so that time will not be wasted, and that teachers will come with pleasure and stay with profit. He ought to be able to aid in selecting a library suited to the wants and tastes of an agricultural community (*Appendix L*). In school extension he should be a

leader, for he can thus make his influence felt in every part of his territory. In directing the home reading of the pupils and the people he may, if he will, find an immense field of usefulness. He can thus create and foster an interest in the welfare of the farm and the home as adjuncts to the rural schools.

He can understand and sympathize with teachers better if he has an experimental knowledge of their work. No supervisor is so good as he who climbed from the lowest rounds and knows all the steps. That this is indispensable we are not prepared to state. There are some very excellent supervisors who have but little experience in teaching, but who have seen enough and studied enough to know how it ought to be done. Experience would have been helpful, however, in understanding the limitations of their work.

First and foremost a supervisor should be able to instruct his teachers in the methods of organization and management of schools. This is particularly the case in rural schools, where so few teachers have acquired skill in teaching. But instruction with a teacher is like instruction with a child. There must be an awakening, an arousing, a hungering after instruction. The conditions of "being filled" are that we must "hunger and thirst." The supervisor must inspire his teachers with a desire for better things. He should lead them to see that time is precious, and that the children in school this year may be on the farms next year and no more in school forever. They must know what to do and do it. The supervisor should be a source of inspiration. His corps of teachers must be alive, and eager, and studious. The thing most to be abhorred in school work is the teacher dead to advancement in professional studies. The supervisor must rouse teachers to work out for themselves plans and methods for building up their schools, and must set forth the principles which should control them in their work.

The county superintendent, or the supervisor of schools in any rural community, should have had recent experience in the schools which he is to supervise. In cases where this is not possible he should make a careful study of the peculiar surroundings of the schools of which he is to take charge. If the new departure which seems to be at hand in rural school education is to be a success, it must be carefully conducted in reference to those environments which are peculiar to each section. The supervisor who is to have a controlling influence in choice of text-books, in courses of study, in the selection and use of libraries, should be thoroughly conversant with the physical characteristics of his district, with the interests of the people, with their sources of wealth and living, and with the home life of the children (*Appendix O*). Whether it be a mining or a grazing region, whether agriculture or horticulture predominates as an interest, he should make himself at home in that domain of science or knowledge which will increase his usefulness as a school officer.

THE HOME AND THE SCHOOL.

The parents of children need instruction as well as the children themselves. The home influence and the school influence should be harmonious, or confusion and uncertainty will arise in the child's mind as to what he should do. The people must be reminded that the school is an integral part of the community, and not a separate affair which the law compels them to support, and which takes their children away when their assistance on the farm is most valuable (*Appendix O*).

In establishing the true relations between the home and the school, between the necessities of physical and those of intellectual education, the supervisor of rural schools finds an unlimited field of usefulness. In rural districts parents are often ignorant of the advancement education has made since the days when they went to school, and they are often too ready to criticise anything new. The supervisor must gain their confidence, so that they will yield their ideas to his, and allow the teacher in their school to follow his directions without any hindrance from them.

The supervisor can exert a wonderful influence in bringing the fireside to the support of the teacher. To do this he must be able to educate the people concerning their relation to the school, as to sending the children regularly, as to providing necessary material, such as books, etc., as to allowing every teacher to pursue those methods of teaching which his skill and experience suggest as best suited to the wants of the school. At meetings of agricultural clubs, at town rallies, at educational "barbecues," at commencements, at spring festivals, at farmers' institutes, he should embrace every opportunity of saying a word for the schools, in order to arouse the people and interest them in the whole system of education. The columns of the country paper afford the supervisor a very ready means of reaching the people. Almost every farmer takes the county paper that comes weekly to his fireside, which gives the news of the outside world and the doings of his neighbors. School news is an important item and should never be omitted. Every week the paper should contain something of educational interest from the pen of the supervisor, though not always over his signature—suggestions for improvement, statistics of enrollment and attendance, new and better ways of teaching, plans for schoolhouse construction and decoration. The press is valuable to every teacher and helpful to the system of education by bringing farmers into sympathy with the great educational movements of the world. The press gives a larger audience, though it enforces a shorter address. But a little every week, full of variety and interest, will eventually build up a healthy sentiment in the county and educate parents as well as children.

The supervisor should have a direct or indirect control of the selection of teachers. The crisis in the history of schools is when teachers are to

be chosen. No one is so well qualified to choose them wisely as a faithful supervisor, and no one is more likely to do so conscientiously, since he knows the value of efficient teachers. This control can be given him directly or indirectly. If he does not wish to have the direct choice in individual instances, the same may be accomplished by giving him the power to examine and license teachers for his supervisory district. No one, then, can be selected by the board of directors except such as are approved by him. He prepares an eligible list, to which the board is limited in making its choice. If the superintendent is conscientious and courageous in the preparation of this list, he can safely leave the responsibility of the individual appointments to the board.

In many cases the questions for such examination are prepared at the state office. In some instances the county board conducts the examinations, and in a few the answer papers are sent to the state office for final examination and approval or rejection.

The supervisor should be slow to condemn a teacher who is honestly striving to succeed, but if, after faithful and earnest effort, teachers clearly prove that school teaching is not their vocation, or, after repeated warnings, teachers will not try to do the right kind of work, it is clearly the duty of the supervisor to report the facts to the directors, and his report should be given great weight by them. The power to revoke the certificate is usually in the hands of the supervisory officer. It should be exercised with great caution and deliberation, but fearlessly whenever there is sufficient reason for it.

Since the supervisor is responsible for school methods and for results in teaching, the arrangement of the course of study and the selecting of the text-books should be largely, if not entirely, left to his direction. It is his particular business to know books as well as to know teachers. It is not to be expected that the men who constitute the ordinary "committee on text-books," and whose daily business has no relation whatever to school texts and their use, can decide what book is best for use in the schoolroom. It is very well to have a committee on text-books composed of the members of the board, to prevent possible abuse, but the advice of the supervisor should have much influence in determining the character of the books used in the schools.

SCHOOL DIRECTORS.

It is important that the relations between the supervisor and the school officers should be clearly defined. The directors' stand much nearer the people and have an immediate interest in the welfare of the schools. They contract with the teachers, care for the financial affairs of

* Director includes whatever term is used to designate the local school officers in any state — as director, commissioner, school committee, trustee, etc.

the district, purchase supplies, and are charged with the general business management. The success of the school depends very largely upon the kind of men who are elected to that office. In the rural districts especially the duties of the director are mainly of a supervisory nature. He should inspect frequently the schoolhouse and school premises; he should see to it that everything is provided which is necessary for the comfort and convenience of both teacher and pupils, that the outbuildings are in a decent condition, and that the supplies are used with due regard to a wise economy. In the discipline of the school he should give a strong moral support to the teacher, and his influence should at all times be on the side of order and obedience. The board of directors should make such rules and regulations for all the schools under its control as it deems necessary for the preservation of school property, for securing punctuality and regularity, and for the general welfare of all concerned, and it should support the teachers in their rigid enforcement. It should be in constant correspondence with the supervisor, so as to keep him informed respecting the progress of the school, and in case a teacher is derelict in his duties, or if for any reason the school needs a special visitation, it should inform him at once. On the other hand, it should be the aim of the supervisor to establish the most cordial and intimate relations with the local directors. The supervisor should magnify the office of the director. Whenever he visits the school he should, if possible, induce the director to go with him. If at such visits they inspect the condition of the outbuildings and the premises, the supervisor can often propose plans for the improvement of the buildings which the director will more readily appreciate and approve.

The inspection of a school by a competent supervisor is an object lesson of importance to the director. He is able to see at what points the supervisor is aiming, and he learns something of his ideas and plans. He will thus be better able to counsel and advise the teacher in the frequent visits which he makes to the school, and make more intelligent and specific reports to the supervisor. The practice on the part of the supervisor of calling the directors together at stated times for mutual conference is very commendable. These officers are often ignorant of their duties, but in a large majority of cases they are willing and anxious to learn. There is no more effective way of improving the rural schools than that of instructing and informing the men who have them in their immediate charge. No doubt large sums are lost to the various funds through carelessness on the part of treasurers and secretaries in the rural districts in keeping their accounts. The supervisor should make it his duty to audit these books at least once each year, with a view to accuracy of statistics and economy in expenditures, and this should be one of his duties under the law.

THE VISITATION OF SCHOOLS.

The supervisor's method of visiting schools may be considered briefly. First, he visits schools to see how and what the teachers teach, whether their manner is composed, their method clear and concise, their style interesting; whether they are teaching valuable facts, or wasting time on trifles; whether they are teaching what is right or what is wrong. Second, he goes to find out what the pupils know. This is a test of the past work of teachers, which is shown by the general manner of recitation, the promptness with which pupils reply, the amount of information they have, the degree of skill they manifest, or the power of original thinking they have developed. Third, he inspects the physical conditions of the school building and grounds. He should note the conditions of the outbuildings, and, if he finds them unsuitable in any respect, he should say so frankly to teachers and directors, and insist upon a change at once. The supervisor must know whether good light, good seats, proper temperature and ventilation, and thorough drainage are secured. The supervisor should carefully observe the moral atmosphere which surrounds the school, whether it is on the side of order and obedience, of modesty, and of all those virtues which make the character of the typical American citizen. All these are demanded in order that good teaching may be made possible, and good health and public morals may be preserved.

Such being the purpose of the visit, the supervisor should put himself in easy and cordial relations with the teacher and the pupils, that he may have a true understanding of what each can do. The teacher may conduct one or more recitations in the various subjects of study, in order that the supervisor may see the usual methods of instruction. The supervisor can then suggest improvements if needed, and can even take the class in hand and demonstrate them. That he should ask for a class in any particular study and give the pupils a rigid oral, or even written, review, while the teacher may be attending to some other duty, is proper, for by this means he can find out how much instruction has been given since his last visit and how thoroughly the course of study is being adhered to. It is, however, often best to allow the teacher to pursue the usual routine of exercises, in order that the supervisor may see the school at its everyday work.

An inspection of the teacher's register should not be forgotten. Such a register in every rural school should show the name and age of each pupil, the studies pursued, where each class commenced and its progress during the term, so that a new teacher can at a glance understand at what point the study of each branch to be taught is to be taken up. The supervisor should insist that such a register be carefully kept by every teacher under his control.

A private record of his own, in which names, dates, classes heard, conditions of rooms and premises, material needed, and general observations, are kept, will aid the supervisor. He can by this means trace the development of any one school and can more readily observe whether it progresses or retrogrades.

SCHOOLHOUSES AND FURNITURE.

Before closing, your subcommittee desires to emphasize the proposition that the supervisor should have a controlling voice in the erection of the rural schoolhouse, as respects all its sanitary conditions. Before the contract for a new building can be legally let, the written approval of the supervisor should be necessary, certifying that as concerns heating, lighting, ventilation, and everything which conduces to the health and physical growth of the pupils, the requirements of hygienic rules and sanitary science have been carefully and fully complied with. The rural schoolhouse should be built in accordance with the laws of sanitation and modern civilization (*Appendix M*). It never will be until the state, speaking through the supervisor, compels it as a prerequisite for receiving a share of the public funds.

The supervisor should not be blind to the small things which minister to the comforts of the pupils. Often the rural school-teacher has received no instruction upon these points. If the supervisor finds pupils facing a strong light, he should call attention to the evils likely to ensue, and suggest a remedy. The same is true as regards unsuitable desks or seats. The necessity of proper ventilation and proper temperature should be constantly dwelt upon. Without a thermometer, with no means of ventilation except the door and windows, the rural school-teacher needs and appreciates all the suggestions an intelligent supervisor may make.

Akin to this is the suggestion that the supervisor should insist that the schoolroom be kept clean and neat for sanitary reasons. The floors should be scoured as often as they are soiled; the wood, trash, and ashes should be carefully kept away from around the stove. The walls should be swept free of dust, the chalk racks kept clean, and the window panes polished. Pupils also should be required to keep their desks in order and their books clean. It is stimulating to the little ones and helpful to teachers for the supervisor to have them show their books, and to take occasion to comment on the care or on the untidiness with which they are kept.

No better educational influence can surround the children than a well-arranged schoolroom, whose floors and windows are clean; whose walls are free from dust and decorated with pictures, whose school grounds are well-ordered and shaded by trees and adorned with flowers, and the

school presided over by a qualified teacher who is the personification of neatness and good cheer. Under such conditions the child is self-restrained and respects himself because his surroundings are respectable. The child naturally puts himself in harmony with his environment. If the teacher is neat and the schoolhouse is in proper order, the pupil will copy the example. Day by day beautiful, comfortable, and clean surroundings will have their ethical influence upon his development, until he comes in time to abhor anything that is not beautiful, well-ordered, and clean. This point is too often overlooked in plans for supervision. The reverse of this feature is also true. The rural schoolhouse, generally speaking, in its character and surroundings is depressing and degrading. There is nothing about it calculated to cultivate a taste for the beautiful in art or nature. If, under the influence of intelligent supervision, this can be changed, it will be a work over which coming generations will rejoice.

"There is scarcely a sounder principle in pedagogy than that care begets care; order, order; cleanliness, cleanliness; and beauty, beauty. Things conspicuously good command the respect of children, invite their imitation, and in ways real, though obscure, sink into their souls and mold their being. The power of good example in men and women no one disputes, but there is power akin to it in things, provided they embody the better thoughts of men and women—a power of which more should be made in school management than is made at present" (Massachusetts State Report, 1895).

If children are daily surrounded by those influences that elevate them, that make them clean and well-ordered, that make them love flowers, and pictures, and proper decorations, they at last reach that degree of culture where nothing else will please them. When they grow up and have homes of their own, they must have them clean, neat, bright with pictures, and fringed with shade trees and flowers, for they have been brought up to be happy in no other environment. The true test of our civilization and culture is the kind of home we are content to live in, and the influences of our schools should help to form a disposition for those things that make home life happy and healthy. If the farmer's boy can be taught to love books when he is at school, he will have a library in his home when he becomes a man; if the farmer's girl can be taught decoration at school, she will want pictures and flowers and embroidery when she becomes a woman.

We appeal also for the influence of classical art in our schools. If we have pictures, why not have reprints of those that have moved the hearts of men? Why not have the best looking down from our school walls? They are within the reach of any purse. One reprint from the great masters is an uplifting influence for all time. Cheap and gaudy adver-

tisements, glaring and painful chromos, depress the true spirit of art and perpetuate the crudeness we seek to overcome.

The same can be said of music. If we are to sing songs, why not sing the songs of masters? They have sung many for children, beautiful far beyond the rude compositions that fret our ears everywhere. Also with literature. Why not read the simple classics written for the little ones, and the greater classics for the older ones? Why not in all things get the noblest and best that the world has given, and use them to help our children onward and upward?

The silent influence of clean surroundings, of cheerful teachings, of classical pictures and music and literature, the presence of flowers and their care, the planting of shade trees and studies of their growth, will be a supervision so constant and so searching that no child can escape it. Under its potent warmth, like the steady, quiet shining of the sun, the child plant grows into all the marvelous possibility of flower and fruit.

SUMMARY.

1. As to the character of the supervisor who is brought in contact with the rural school-teacher in the discharge of his official duties :

(1) He should be selected with special regard to his peculiar fitness for that office. Whether his office is elective or appointive, his qualifications, in order that he may be eligible, should be such as to enable him to challenge the respect of those whose work he is required to supervise.

(2) In regard to his scholarship, it should breathe that essential spirit of learning necessary to making good, strong schools. The position of supervisor should be made professional with a view of meeting the demand for the best education which the rural school can possibly afford. This requires a scholarship which is above that of the ordinary man. The tendency to put persons in the supervisory position who have no mental attainments worthy of mention is earnestly deprecated.

(3) In regard to moral character, the supervisor should be a living, inspiring example of such a life as alone is worthy the Christian civilization of our times. He should carry with him a spirit of sincerity in his work, so that people, teachers, and pupils may look to him with hearty respect, and with entire confidence in the integrity of his purposes.

(4) In regard to his professional spirit, he should be in touch with the best educational thought of the times, carrying with him to the country school-teacher, and to the people of a rural community, the freshness and life which come from reading and studying whatever bears upon the questions he is called upon to aid in solving. He should be a leader, endowed by nature with strong native sense, and at the same time able to impart enthusiasm and energy to all with whom he comes in contact.

2. As to the purposes of rural school supervision :

(1) It should serve to inspire and stimulate the rural school-teacher. If the supervisor is alive to his opportunities, every teacher within the sphere of his influence will be quickened and lifted up to higher efforts for the good of the school. The teachers should learn to look upon him as a friend, and not as a critic; as a wise counsellor, and not as a mere fault-finder.

(2) It should be the means of awakening and stimulating the pupils as well as the teacher. They should look for the visits of the supervisor with pleasure, and profit by his talks and advice. By instituting a system of central examinations for the rural schools, he may quicken and encourage the brighter pupils to obtain the best education within their means. The influence of a scholarly supervisor over the pupils is a very desirable thing in the rural school.

(3) The improved condition of the rural schoolhouse is a sure index of the work of a competent supervisor. The present lamentable condition of these buildings is due largely to ignorance and neglect. Competent supervision in skillful hands can work a marvelous change. The cultivation of a spirit of order and neatness which leads to the ornamentation of the school grounds and to a watchful care over all the environments of the schoolhouse, is one of the purposes of supervision.

(4) Supervision does not accomplish its legitimate purpose when it fails to cultivate a strong, healthy public opinion in favor of everything which tends to make a good school. Hence, the supervisor who contents himself with a perfunctory visit to the school only is not a supervisor in the broad sense of that word. A large share of the work of the supervisor is away from the school and among the people.

3. As to the results to be expected from intelligent supervision:

(1) In regard to the school, it unites teachers for a common purpose, and, by teachers' meetings and by the visitations of the supervisor, it breaks up the monotony and isolation of the country school. Under its influence better teachers find their way into the schools, better methods of instruction prevail, and the tone and spirit of the school are greatly improved.

(2) In regard to the community at large, supervision is just beginning to do its legitimate work. In the establishment of school libraries, in the relation of the supervisor to the directors, in an improved school architecture in which due regard is had to sanitary conditions, in the ornamentation and care of the school grounds, in school extension, in the introduction of studies which will add to the attractiveness and profit of life on the farm, in the consolidation of small districts into larger and stronger schools, in awakening a public interest in rural education, there is a field large enough to occupy the time and thought of the most progressive and most intelligent supervisor. It is here we are to look in the

near future for the best results of supervision as concerns the rural schools of the country.

LAWTON B. EVANS, *Chairman*,
CHARLES R. SKINNER,
HENRY SABIN.

REPORT OF THE SUBCOMMITTEE ON SUPPLY OF TEACHERS.

The Subcommittee on Supply of Teachers has distributed a large number of circular letters of inquiry, designed to elicit information in regard to the agencies now existing for the preparation of teachers for rural schools, and for the improvement of teachers already in the service, and also in regard to certain conditions, as to the manner of certificating, employing, and paying teachers, which affect the supply. In connection with this inquiry the attempt has been made to gather information as to the defects and excellencies of existing systems, together with suggestions for improvement. To these a sufficient number of replies has been received to justify the belief that they give a fair average statement of the conditions which this report has to meet. Without attempting to summarize the returns, your committee would state the results of the inquiry upon the problem presented, and mark out the lines which must be followed, and to what end, in order that the child in the country school may receive the education which is his due. In some state systems progress along these lines is much more advanced than in others, and in some individual cases the desired end has been attained; but this is true, as regards the entire country, in so small a degree that it is unnecessary, even if it were possible, to particularize. With but few exceptions the recommendations made could be justified by reference to various states or communities in our own country, and there are none which do not rest upon successful experiences at home or abroad. It will be found quite impossible to treat the rural school in any of its aspects without touching in some degree upon ground common to all classes of schools, and this is especially true as regards that branch of the problem assigned to this subcommittee.

Certain conditions now very general must be changed in order that the rural school may be supplied with better teachers.

TEACHERS.

There must be in rural communities a clearer appreciation of the qualities essential to a good teacher. It is too often the case that no distinction is made between a teacher of superior scholarship, of proved

ability in instruction and discipline, of long experience, and one far inferior in all the qualities essential to success.

The teacher must be engaged for the school year. In many cases the engagement is from term to term, and these frequent changes are without exception classed among the most potent causes of failure in the rural school. It is widely true that the school is in session less than half the year; it is often true that in this short school year two teachers are employed, and seldom does a teacher remain a second year. Engagements should be for a longer term than one year, or continuous, and terminated only for cause, as is the case in many cities.

One of the most important points to be considered in a system of schools is that of the authorities employing teachers and assigning them to their work. In cases in which the county or township is the unit of school administration, the problem is solved; in case the district system prevails, the district containing one school, it is evident that the employment and assignment of teachers should be transferred to the authorities of the larger school unit, in order that in the assignment advantage may be taken of peculiar abilities and aptitudes.

The authority which examines should not employ.

Closely allied to this question is one of great interest in the southern states, namely, that of assignment of teachers to negro schools. For a full treatment of this subject see *Appendix J*.

SCHOOL YEAR.

The school year must be lengthened to a full school year of nine or ten months. In many states a minimum length is prescribed by statute, but in few cases is this sufficient. Whatever efforts may be made for the improvement of the rural school, until there can be offered a "year's work and a year's wage," it will be difficult and often impossible to retain accomplished teachers for continuous service; with this, many such teachers would choose this service, from family and social connections, and from a natural preference for rural life.

In countries in which people are accustomed to the action of centralized authority, prescription settles the matter, as in France, where the school year is more than forty weeks; in England, where, as conditions of receiving the government grant, the principal teacher at least must hold the government certificate of qualification, the school premises must be in good sanitary condition, the staff, furniture, and apparatus must be sufficient, and *the school must have met 400 times (200 days) in the year*.

In countries like our own, in which popular initiative in political matters has been the rule, success must usually come by other methods, and in this respect we have much to learn from our neighbors. In Canada the schools have been lengthened to a full school year mainly

under the stimulus given by the mode of distributing the government grants.

Letters and reports have been received from the different provinces. By these it appears that the average length of the school year was in Ontario 212 days; in New Brunswick, 216 days; in Nova Scotia, 198.7 days, the full school year being 216 days, and some schools exceeding this limit. A report from Regina, in the province of Assiniboia, states that the full school year is considered to be twelve months less the holidays, amounting to seven weeks, but this limit cannot be attained where the sparseness of the population obliges the pupils to travel long distances, on account of the severity of the winters.¹

Adding to our plan of requiring a minimum school year the Canadian plan, already in a degree recognized in some recent school legislation, of making the amount of government grant depend in a large degree upon the length of the school year and the average attendance, consolidating schools wherever practicable, and giving from the larger units of school administration to aid the smaller and weaker, the obstacle of the short term and insufficient compensation can be removed.

SUPERVISION.

Incompetent supervision forms one obstacle to a supply of better teachers. This obstacle may be removed by securing professional supervision, as is provided by the plan of district supervision so successfully applied in Massachusetts, and just enacted in Maine. The Subcommittee on Supervision treats this subject fully.

It is necessary that more definite tests of professional fitness for the work of supervision be instituted. The extension of pedagogical instruction in colleges and universities in recent years is gradually elevating the work of supervision to a higher pedagogical plane, yet the point has not been reached of demanding professional preparation as an essential condition. For examples of the requirements of more definite tests of fitness see Ontario and France (*Appendix N*).

It is not unreasonable to hope that in the not distant future the popular standard of education may be so raised that on all educational boards of control, from the state board down to the county or township school board, so much of pedagogical fitness, from the professional point of view, may be demanded as to insure the intelligent consideration of such questions pertaining to the profession as may come before them.

¹The subcommittee is under obligation to more than it can name, throughout the United States, for information. For aid in its inquiries received from the provincial school authorities of Nova Scotia, New Brunswick, Quebec, Ontario, and Manitoba, and from Mrs. Etta F. Grover, of Regina, Assiniboia, and Mr. Chisholm, Principal of the high school in Regina, it would here express its thanks.

There are various recognized agencies for the improvement of teachers.

ASSOCIATIONS.

The state associations are mainly in the control of teachers representing systems of schools; in but few states are rural school-teachers much in evidence at these meetings. The fact that in some states the opposite condition holds shows that the state association may be made a powerful means of uplifting for the rural schools.

In many of the states vigorous county associations are found, although this is by no means universal. In these the rural school receives more recognition, but not often all which is its due. When the county association holds frequent sessions, and makes the interests of the rural schools prominent, it proves one of the most efficient agencies.

Some of the states report local associations of rural school-teachers which are very efficient. Generally the success of these is largely dependent upon the spirit of the local or county superintendent. With good professional supervision in township and county, the wants of rural schools and their teachers can find due consideration in local and county associations; and by proper organization of rural school sections in the state associations there may be secured such an affiliation of state, county, and local associations as will insure in time a full recognition of the peculiar needs of the rural schools.

It is desirable that the affiliation between these associations be such as to secure in part the working together, along the same lines of thought, during the same years, by the local, county, and state associations, under the inspiration of the state department of education.

SUMMER SCHOOLS OF SEVERAL WEEKS' DURATION.

In some cases summer schools are apparently conducted for the purpose of enabling those attending to pass examinations for certain certificates. The tendency is necessarily toward cramming for the examinations, and so far they cease to be educative in any proper sense of that term.

There is another class of summer schools, often held in connection with colleges and universities, conducted by able teachers, specialists in their departments, for the purpose of advancing education along true lines. Among these, the Agassiz School at Penekese, many years ago, was a revelation and an inspiration to the teachers of the United States. These schools have multiplied in number and enlarged in scope throughout the land, and have proved of great advantage to thousands, not only by increasing their knowledge, but also and much more by bringing them under the personal influence of leaders of thought and masters in teaching.

A third class, with professional courses in psychology, pedagogy, and methods, often combining the character of the second class, preceding, offers great advantages for professional improvement. There should be in every county one of these for the especial benefit of teachers of the common schools; they should be free of tuition, organized and conducted under the supervision of the state department of education, continuing from four to ten weeks. There should be provision for practice teaching, and the instructors should be familiar with rural schools, their condition and needs.

INSTITUTES.

The normal institutes, so-called, organized in some states, especially in the West, are essentially the same as the third class of summer schools, described above.

County institutes of one week or more, held during the school year, may exert a great influence in the improvement of teachers. When they are conducted under efficient supervision, with a body of instructors capable of increasing the range of thought of teachers, and are organized under such laws as will secure the attendance of the teachers of the county, they prove a powerful means of educational advance.

For the description of such an organization of institutes and results see *Appendix P*.

Teachers' conventions or institutes of one day, as conferences between teachers, or with superintendents, will prove effective to a greater or less degree according to the purpose, plan, and mode of conducting. In order to secure the best results, they should be held at intervals so frequent that the effect may be continuous.

READING CIRCLES.

The success of the Chautauqua movement, of various organizations for home study, and of teachers' reading circles, in some cases, proves that these may be made generally efficient. There will be no lack of interest on the part of the teachers, if the organization and direction be wise.

The problem is apparently not a difficult one in the larger places, with systems of schools, where numbers of members are readily brought together, but the case is quite different in the case of rural schools. The results reported clearly indicate certain elements essential to success. To secure the advantage of organization there must be a central board of control. This may be a state board with auxiliary boards in counties and towns. Not only are books for reading to be selected, but a plan of work should be carefully drawn up and widely circulated among teachers. The central board should keep in touch with the members of the circles,

papers based upon the books read should be written and carefully examined, and the results attained should in some way be passed to the teacher's credit; thus, for a certain number of certificates indicating the completion of a course, a diploma may be granted.

The plan of organization is perhaps best formed by the teachers of the state acting through their associations, and the courses of reading can best be made out by committees chosen by the teachers for this purpose; the work may be directed by a committee, but, from comparison of results reported, the varying degrees of success, and the many failures, your committee believes it desirable that there should be in the state department of education a bureau of teachers' reading circles, with sufficient force to keep in touch with the local circles, to conduct and encourage correspondence with them, and in every way to promote their interest and efficiency.

Effective study demands the use of books for consultation and reference. Hence the reading circles should be conducted in conjunction with the lending libraries hereafter mentioned.

The reading circles must be considered as a means of improvement, especially for teachers already in the service. No other agency can really take the place of personal instruction in the original preparation of a teacher for his work. (See *Appendix Q*.)

LIBRARIES.

The country town has suffered, and still suffers, from the lack of books. In many states there is now a movement toward the extension of free library privileges, and wherever there is a town library every school should be made a branch. This system of library extension, becoming universal in cities, can be extended to country as well. By frequent exchange of books, under the immediate direction of the teacher as branch librarian, every teacher and pupil will have the use of a larger library in addition to the special library which should be found in every school. Some books should be added to the library for the special benefit of teachers.

The library belonging to the school is a necessity. Books lent for a time serve their purpose, but a love for good books and the ability to use them aright come most surely from daily companionship. From the library center, the school can be carried into the home. A more valuable work can hardly be done by the rural school-teacher than this, of developing a love for good reading.

In addition to these there should be established in the county, or the state, or both, a professional library for the use of teachers. This might well be a state library with county branches, and the management of it might well be under the bureau of reading circles which has been men-

tioned. Such a state school library has been established in New York (*Appendix L*).

TEACHERS' TRAINING CLASSES.

The agencies thus far treated tend to the improvement of teachers already in the service, none of them furnish a first supply for rural schools, and there is a lack of special agencies designed for that end. The investigations of your subcommittee show that the existing normal schools in general do comparatively little in this direction, except by the teaching of their undergraduates. Although originally established for the benefit of the common school, they have naturally tended to keep step with the development of systems of schools in cities and large villages; the majority of rural teachers, often a vast majority, are now without any professional preparation whatever. The tendency is strikingly shown in returns from the Oswego, N. Y., Normal School: "Nine-tenths of our pupils come from the country; not one-tenth ever teach in rural schools." In one of the older states, after many years' existence of normal schools, of more than 12,000 teachers in the public schools of all classes less than 5,000 have ever attended normal schools, less than 4,000 have graduated from normal schools. Over 1,500 vacancies occur annually in the schools of the state; the normal schools of the state graduate about 300 annually, nearly all of whom become teachers in graded schools.

One of the leading states of the Union, with a well-organized school system and a grand equipment of normal schools aiming directly to train teachers for the rural schools, reports that a majority of its teachers have had professional training. Many other states report a much smaller proportion of trained teachers; one, 8 per cent.; another, with one of the best school systems, 30 per cent. As a contrast, an answer to the inquiry of your committee, from Manitoba, states: "Sixty-six per cent. of the teachers employed in the province in 1895 were trained. After this year *all will have training.*" (See *Appendix N.*)

The cause for such a contrast appears later in this report.

The normal-school system was first devised especially for the benefit of the rural schools, and in obedience to a tendency which had become increasingly strong for some years previous to the time of their establishment. Some brief passages of educational history bearing upon this subject are here cited:

In 1823 Samuel Reed Hall opened a normal school in Concord, Vt., a school for the academic and professional education of common-school teachers, with a school for practice in teaching. Here Mr. Hall's lectures on school keeping were delivered to his class. These were afterwards published. The character of his work led to his being called to the principalship of the English department of Phillips Academy at Andover,

Mass. He was afterwards invited to take charge of Holmes' Academy, Plymouth, N. H., and consented on condition that the school should be called a teachers' seminary. He opened this teachers' seminary in 1837 and continued it two years. In this school there was a classical department and no practice school, but the course, as printed in *Appendix K*, shows the pedagogical character of the institution and the provision made for its students to gain experience in teaching.

In 1829 a training school for teachers of the common schools was opened in the town of Effingham, N. H., by Hon. J. W. Bradbury, ex-United States Senator from Maine, now living, at more than ninety years of age, in Augusta, Me. By request, Hon. W. W. Stetson, State Superintendent of Maine, recently visited him to ascertain the facts in regard to this school, and the interview is annexed to this report as *Appendix K*.

The sole purpose of Horace Mann in the establishment of the first state normal school in Massachusetts, a purpose zealously carried out by the principal, Cyrus Peirce, was to elevate the common schools of the country. The course of study of the normal school was for one year. In the first year of the school a model school was organized, in which normal-school students had daily practice in teaching. Mr. Peirce himself taught in the model school, as he felt that upon its success the success of the normal school very largely depended. Almost all the pupils at first came from country towns, almost all returned to teach in country schools. There was not then the difference between the rural school and the city school which now exists. In 1847 John D. Philbrick began the experiment of modern grading in Boston, and, with the full development of this system, later, the contrast between the school of the country and the school of the town became more and more marked, and the rural-school problem appeared. The normal-school course, at first simple and adapted to the conditions it was designed to meet, developed to keep pace with the developing school system, and gradually drew away from the rural schools.

The normal school is often removed still further from those who would teach in rural schools by the tendency to raise the standard of admission to the requirements of a high-school course. The fact that most of the towns of the state have a high school is no proof that all those who will teach rural schools can go through a high-school course of three or four years, and then a normal-school course of two or three years. Great care should be taken that the normal school does not get too far from those whom it was especially set to serve. There is needed a more careful determination of the qualities and attainments requisite for entrance upon the work of preparation for teaching. These are sometimes given in larger measure by the experiences and responsibilities

of country life than by the graded city high school, and with these every added step in education is great gain. So far as raising the standard of admission is in response to a claim that all academic studies should be taken out of the normal-school course, it may be said that the claim is not universally recognized as valid by those who have had most experience of work at home, and can find but little warrant abroad. In the normal schools of Prussia, Austria, Switzerland, and France, for example, a larger proportion of time is given to academic studies than in many of the normal schools of the United States,¹ but with directions, certainly in France, that in all the course the professional aim shall be constantly kept in view.

It is evident that for the fitting preparation of teachers for the rural school some agency is needed intermediate between the brief convention or institute and the normal school, with its two or four-years' course, so far beyond the reach of the majority of rural school-teachers. What shall it be?

Several facts must be kept in mind in the solution of the problem: (1) A large proportion of the teachers of rural schools cannot afford the time and expense of a two-years' course in a normal school. (2) The receipts from employment in the rural school under present conditions do not remunerate one for the expense of a normal-school course. This is a simple matter of business, and sentiment will not change the facts. (3) Other conditions remaining the same, attendance at a school is in an inverse ratio to the distance between school and home. This is especially true for a short course.

To meet these conditions there is needed a normal training school with a short course of study. The place—a village which will give over its schools to this normal training school for practice schools. These practice schools, organized as primary schools in one room and as grammar schools in another, will show what can be done with schools in the simplest form of gradation. For a part of the course all the grades should be brought together to illustrate the work of the one-teacher school, such work as should be done in the ungraded school. A faculty of five or six good teachers, including practice-school teachers, would suffice for such a school.

This the general organization—what the work? Treatment of matter essential to good teaching would be grounded on simple fundamental principles. Deficiencies in education would be supplemented by sound teaching; principles of teaching and of school management would be taught and illustrated. Many might learn to do well what they had never done at all; most would learn to do better what they had done poorly.

¹ See Report of Committee on Normal Education, Proceedings of National Council of Education, 1892.

From these schools would come many students for fuller courses of training and a still wider usefulness.

This plan in its development would give a system of district training schools, analogous to the county model schools of Ontario, and the training schools of Quebec and Manitoba, with a course of study and training of one year, the first half of which should be mainly academic, for those who need this preparation, the second half mainly professional, the work so planned that those of more advanced scholarship need take only the course of the second half year. Of these schools there should be at least one in every county of the state (*Appendix N*).

The practice in teaching should be thoroughly organized. Every teacher in the school should be, in a certain sense, a training teacher; he should be responsible for the methods of teaching in his own subjects, and should direct lessons given by members of his classes to children from the model training schools. Besides such lessons, illustrative of methods of teaching, the pupil-teacher should be trained in conducting school work in the schoolrooms, under conditions similar to those which she will find in her own school. While teaching in the practice school under the direction of a teacher in charge, she should be left more and more to her own judgment; she should be held responsible for the control and direction of the school, and for the teaching of a class, not merely of a group.

The membership of the class for training should be limited to such numbers as will give the full advantage of the training course, or, with a practice school of the size presupposed, to about twenty-five. A large class necessitates the teaching of groups, not of full classes with the control of a school. The French law limits the number of students in each normal school to three classes of twenty-five each.

The practice schools should be under the exclusive instruction and control of their regular teachers a sufficient proportion of the time to keep them up to the standard of veritable model schools as well.

The completion of this course should give a teachers' certificate of elementary grade, which would also give admission to the state normal school with due credit on the normal-school course for work already accomplished.

There should be a summer term for rural school-teachers in every normal school in the United States. The plant of the normal school has cost thousands, in some cases hundreds of thousands, of dollars, and for two or three months in the summer this investment remains entirely unproductive. The success of the summer term in The University of Chicago is significant, and the Winona plan, adopted this year in all the state normal schools of Minnesota, sets the example for the nation (*Appendix S*). In normal schools the work of the first year—or the first

part of the course—should be so planned as to have a unity in itself as a preparation for rural school-teachers, and the results accomplished in the summer term should count on this course, so as to encourage subsequent attendance at the normal school. The summer term should not be an institute nor a summer school, in the usual sense, but should combine the elements of the other terms of the year; the attendance of children in the training school could be secured easily for two or three hours a day.

There should be organized in all states a system of normal-school extension analogous to the university extension. Wherever a class of sufficient size can be formed, a teacher should be provided. The work should be so organized and conducted as to lead to definite results which can be credited to the members of the class.

There are two possible agencies in the preparation of teachers for rural schools that have not been mentioned:

1. *City Training Schools*.—In large cities it is not to be expected that the city training school will prepare teachers for rural schools; all their graduates usually find employment at home. But cities in this country with a population of more than 50,000 are comparatively very few, and it is reasonable to suppose that training schools in cities of less than 50,000 will prepare more teachers than can be provided with employment in those cities. The surplus will naturally seek positions in the village and country schools.

Birmingham, Ala., a city of about 50,000, has had a training school for eight years. During that time 25 per cent. of the graduates of this school have found employment in the ungraded schools of the county and state. If the training school is encouraged, it can be made an important factor in the preparation of teachers for rural schools. A part of the course in these schools should, therefore, deal with the conditions of the ungraded schools of the county, and the instruction should be specifically adapted to meet those conditions.

2. *Agricultural Colleges*.—Many pupils in agricultural schools and colleges teach during their course. In some cases the agricultural college is brought nearer the people by the establishment of branches. Thus in Alabama there has been established in each congressional district a branch agricultural school, closely related to the agricultural and mechanical college of the state. Cannot such schools accomplish much in the specific preparation of teachers for the work of the rural schools?

3. *High Schools*.—An effective auxiliary in the training of elementary teachers may be found in high schools. In 1894-95 there were in New York 247 such classes, with 2,482 students. The regulations prescribe the professional qualifications of the teachers who are to instruct these classes, and the equipment and the opportunities for observation and

practice to be furnished. The course of study, extending through one year, covers the ground of common-school studies, including with subject-matter the treatment of methods of teaching, the history of education, school management, and school law. The school is to furnish each day the opportunity for the class, or some members of it, to observe methods of teaching in the several grades of common-school work, and, when practicable, the opportunity to teach in such grades under proper criticism and direction.

A system similar to this is in operation in the province of Quebec.

Although these training classes cannot take the place nor do the work of special training schools, yet they offer a ready means for effecting some immediate improvement in the teaching force of the state, and for the selection of those who have such fitness for teaching as will justify their pursuing a special professional course. The teachers of such classes must themselves have received thorough pedagogical instruction, else the result must be a failure; hence the necessity is apparent for pedagogical courses in all colleges.

According to the generalizations of the superintendent of the last census, over an area of our country of 1,688,827 square miles, containing a population of two to forty-five to the square mile, the occupation of the people is mainly agriculture; of this territory 1,096,790 square miles are occupied by a people mainly engaged in systematic agriculture, leaving about 260,000 square miles, with a population of forty-five and upwards to the square mile, in which the leading interests are commerce and manufactures, and in which professional and personal service are in large demand. The numbers engaged in the principal occupations in the United States, according to the latest United States census, were as follows:

Farm and garden,	-	-	-	-	-	8,375,979
All the professions,	-	-	-	-	-	944,323
Domestic and personal service,	-	-	-	-	-	4,360,506
Trade and transportation,	-	-	-	-	-	3,325,962
Manufacturing and mechanical industries,	-	-	-	-	-	5,091,669

In behalf of all these occupations, except the professions and agriculture, the claim has been made and has been allowed that special instruction in their interests be made an important part of the school curriculum—in commercial courses; in cooking; in manual training, on which such vast sums have been expended. Indeed, for many of the professions much of the school instruction is a direct preparation.

Much is said of the necessity for considering the environment of the child; for bringing into his school life the thoughts and interests of his home life, that the school may not prove to him a thing remote and foreign; of making the school a recognition of his past and a prepara-

tion for his future. Little sign of this can be found in the ordinary rural school.

The courses of study in normal schools of all grades should recognize more fully than they do the environment and probable future life of the children in the schools, or rather, they should recognize the lines along which lives of most probable future happiness would lie. As has been shown, much the largest class of the workers of this country is engaged in agriculture. The environments of their children are rural. The rural school should aim especially to make country life more attractive and beautiful, and should pay more attention to rural industries. Every normal school should have as a means of instruction a school garden, planned and conducted not merely to teach the pure science of botany, but also the simple principles of the applied science of agriculture and gardening; and every rural school should also have its garden, through which the training of the normal school may reach the home. This element of industrial training should be especially emphasized in the colored normal schools and rural schools of the South.

Other countries lead us. A *farm* has been set apart for this line of instruction at the Provincial Normal School at Truro, Nova Scotia. The school garden is common in the countries of Europe most advanced in popular education. The school garden and the nursery of fruit trees are a feature of the normal schools of France; there is a course of agriculture in the normal schools for men, of horticulture in the normal schools for women.

The course in agriculture treats of preparation of the soil, special culture of trees and shrubs, of fruit trees, grafting, and the vegetable garden.

The course in horticulture in the normal schools for women treats of the garden in its general arrangements—the fruit garden, the vegetable garden, the flower garden.

Each garden has a space reserved as a botanic garden for instruction in the science of botany.

The instruction received in the normal school is applied in the school garden of the rural school.¹

¹ The school garden in the New Hampshire State Normal and Training School has proved a source of interest and of instruction to pupils of all grades in the training schools and in the normal schools, such as nothing else can replace. In this garden all the grains and vegetables grown in the region were cultivated, together with a great variety of flowers. Each class in school had assigned to it a plot, for which it was responsible. In the George Putnam School, in Boston, a part of the school yard was turned into a garden, which has received several prizes from the Massachusetts Horticultural Society. On certain days the Jardin des Plantes in Paris is used as a place for botanical study by the school children. I found once on the roof of a London schoolhouse, which was used as the girls' play ground, a large and beautiful collection of plants. And yet

A French report says that the French farmer is at first opposed to book farming ; but when he sees that the products of the teacher's garden are superior to his own, he is glad to learn.

M. Boutan, an inspector general of public instruction, says in a report: "We can cite several departments in which, thanks to the initiative of the teachers, the wealth of the country has increased from year to year, and from which the exportation of fine fruit has become the source of considerable profit."

There can be no doubt that great improvements in agriculture might result from the general diffusion of such instruction through school gardens, under the direction of qualified teachers. Is there any other means for such improvement in sight of this generation? And a still higher good for the country life might come from thus blending its utilities and its beauties in the thought of the child.

Your subcommittee would also emphasize the importance of two other lines of work already developed in the graded schools, and of a third, which must be made prominent in all schools—language, elements of science or nature study, and morals. Whatever goes into the common school must go into the normal school. Hence, even in the brief course of normal-school training, the instruction in the English language, instruction in the essential elements of its beauty and strength, instruction leading toward such command of its best forms as will tend to make it a transparent medium for the expression of thought, must be held of fundamental importance. There must be such training in elementary science and in manipulation as will give the teacher essential knowledge and skill in this line of teaching, and there must be such instruction in elementary psychology and ethics as is necessary for the comprehension of general principles of method, and of the scope and methods of instruction in morals; and as the result of all the preparation which can be given there should be a clear comprehension of the essential aims of education. Would that all our teachers could have constantly in mind and at hand such a statement as is found on the desks of the common-school teachers of France (*Appendix R*).

EXAMINATION AND CERTIFICATION OF TEACHERS.

Were teaching a profession in the sense in which law and medicine are professions, teachers themselves would formulate the terms of professional recognition; but evidently the time for that is not yet. What the public school is immediately to aim for is uniformity in state examinations, and we have to consider the agencies, the standards, the methods for these the rural school almost utterly ignores its only possible laboratory, the out-of-doors, the garden laboratory, right at hand. Here lies a duty, not a choice merely, for the normal school.—C. C. ROUNDS.]

examinations. The agency may be the state superintendent of public instruction, a special examining board, or a state board of education when such board exists. Times and places for examination should be announced frequent enough and numerous enough to meet all reasonable demand. The scope and character of the examinations should be announced long enough beforehand to enable candidates to consider the matter deliberately, as is now done in regard to examinations for admission to college and for the civil service. Information as to books for use and as to modes of preparation should be given. Each examination should be conducted by an expert, and the papers should be critically examined.

Certificates granted should be graded as to the range of the examination, not as to length of validity, unless the certificate be a provisional one. A one-year's physician would receive little credit; why should a one-year's teacher receive more?

Examinations should cover the range of work required of the teacher, and should be written, oral, and practical. The written examinations should be planned not merely to test the candidate's range of acquirement, but rather his accuracy, his general style of thought and expression. The oral examination should test the range of attainment, the personality of the candidate, and his readiness in resource. These two are generally combined in one—the written form, but there are great advantages in the separation whenever it is practicable.

The examination for the elementary certificate should cover the ground of common-school studies, with so much of the elements of natural science as is demanded for the intelligent teaching of the nature lessons in the common-school course. The questions should be few, but comprehensive, and such as will fairly test the reflective power of the candidate..

The professional examination for the elementary grade of certificate should not be severe, but should require clear general statements regarding methods of conducting recitations and the organization and management of a school.

The practical examination, or the test of skill, for the elementary grade of certificate, should include some test of the candidate's ability to plan a lesson and an examination paper in some common-school subject, and to conduct a recitation. If the candidate has been a member of a class in training, a record of this practical work might be brought over from the work in that class.

So much ability as is implied by this examination is necessary to the good teaching of any school. Wherever this ability cannot be secured now for the rural school, a clear public appreciation of the need will lead to a supply of the means.

The examination for the advanced certificate should in general cover

the ground of an English high-school course of at least three years, or fair equivalents for such a course. A special certificate might be given for a foreign language. This examination should include psychology and ethics, drawing, and the elements of vocal music.

The professional examination for the advanced certificate should include history of education, methods of teaching, general principles of pedagogy, and the organization and management of schools.

The practical examination should include the preparation of plans of lessons and of examinations; judging the character of a lesson and a written paper; teaching, including an oral lesson on some subject in nature study, elements of science, language, or morals.

As in the examination for the elementary certificate, if the candidate is a member of any training class, the practical examination can be taken in that class.

Formulating the preceding statements, teachers' certificates should be graded in two general classes—elementary and advanced—and in each class three grades.

ELEMENTARY.

- (1) Elementary scholastic certificate, Grade 3.
- (2) Elementary professional certificate, Grade 2.
- (3) Elementary certificate of skill, Grade 1.

ADVANCED.

- (1) Advanced scholastic certificate, Grade 3.
- (2) Advanced professional certificate, Grade 2.
- (3) Advanced certificate of skill, Grade 1.

A life certificate of either class and honorable recognition in the profession should be granted after a certain period of successful teaching to those holding the first-grade certificate of that class.

In each class the higher certificate presupposes the lower; thus Grade 1 cannot be obtained without 3 and 2.

Many, if not most, of the examinations of teachers for rural schools in the United States today do not go beyond the range of the elementary certificate, Grade 3, as here given; the elementary certificate, Grade 2, could be obtained by attendance upon a teachers' training class in a high school. A course in a district training school organized as described in this report, or a partial course of one year in a state normal school, should give the complete elementary certificate. In many cases thoughtful and successful teachers in the rural school, by their own study and the help afforded by a well-conducted reading circle and a normal extension course, could rise from the elementary certificate, Grade 3, to the complete elementary certificate. A high-school course would give advanced certificate, Grade 3, and, with the course in a high-school teachers' train-

ing class, might give advanced certificate, Grade 2. The complete advanced certificate could be obtained by a two-years' course in a normal school.

This gradation of examinations and certificates will utilize to the utmost the existing educational agencies, will point out to teachers a way in which they may rise step by step, and will thus encourage their advance, and will secure to the rural school the benefit of their improvement.

A question will arise as to the interval between the elementary and the advanced certificate. (For a wider interval established in Manitoba see *Appendix IV*.) In many cases it may be best to lower the standard of the advanced certificate and make it intermediate between the elementary certificate and the normal-school diploma attesting the completion of a two-years' course. On this question your subcommittee pronounces no opinion. It would point out a way by which the teachers of the rural school as it now is may be taken as they are and induced to enter upon a course of advanced study, and by which the school may derive all possible benefit from the advance; and your subcommittee believes that, by such a course, standards will gradually be raised all along the line.

Your Subcommittee on the Supply of Teachers for Rural Schools, in closing its report, would call attention to some of the main points in this discussion.

It appears that there are numerous agencies which may be made available for the improvement of rural school-teachers already in the service. With these the only question is that of more perfect organization.

Although there is in general an increase in interest in educational questions, and an elevation of standards of teaching, yet the large majority of rural school-teachers now enter upon their work with no professional preparation; the improvement in the character of rural schools, where there has been any improvement, has been slow; large sections of the country report no advance, some report a decline.

The causes for this condition, and the changes needed, are not far to seek:

1. The school year must be lengthened to a full school year of nine or ten months, in order that skilled teachers may be retained. This result can be secured, as it has been secured elsewhere when its absolute necessity has been recognized. The state, among other conditions for payment from the school fund, may prescribe a full school year, which is done in England, as logically as six, or seven, or eight months, now done in some of our states, or it may secure this result, as it has been secured in Canada, by making the length of the school so prominent a condition in the distribution of the school fund as to insure the co-operation of the county and the town to this end.

2. The existing agencies for the supply of teachers for rural schools

do not suffice. There must be modifications in these, and the provision of others.

3. There must be some definite standard for the certification of teachers, coming within reach of the teacher of the rural school, and encouraging advance to such higher degrees of attainment and skill as will give full professional recognition. And your committee believes that some provision should be made to secure inter-state recognition.

The question of finance does not lie within the province of this subcommittee, but it does not believe that the financial difficulty need prevent the necessary reform. When there is once full recognition by the state of its final responsibility for the education of every child within its borders, there will be possible such an adjustment of expenses between it and the lower educational units as will be burdensome to none and just to all.

Your subcommittee has sought to ascertain accurately what the rural school now is; in all its suggestions it has had in view the rural school as it ought to be. It believes that this nation can have such a system of schools for all its people as may challenge comparison with any other, and that it will have such a system when it clearly perceives the injustice and the peril of the present condition, and the way in which safety lies.

CHARLES C. ROUNDS, *Chairman*,
DAVID L. KIEHLE,
JOHN H. PHILLIPS.

REPORT OF THE SUBCOMMITTEE ON INSTRUCTION AND DISCIPLINE.

Your Subcommittee on Course of Study, Methods of Instruction, and Discipline in Rural Schools begs leave to report herewith that it has carefully considered the conditions which prevail in thinly settled districts with the intent to discover the evils that exist in the schools as a consequence of those conditions, such, for example, as (1) the want of classification and (2) the impossibility of thorough instruction on the part of the teacher, as well as (3) the lack of that stimulus which comes to the pupil from working at reasonable tasks in company with his equals. Your committee has hereinafter described and discussed various remedies, which it believes will have useful results in practice.

About one-half of all the teachers in the United States teach what are called ungraded schools. They receive in one room pupils of all ages and all degrees of advancement, from ABC's upward, sometimes even to algebra and Latin. In extreme cases each pupil is a class by himself in all branches, except perhaps reading, writing, and spelling. It quite often

happens that there is no uniformity of text-books, each pupil having a different edition or different author; the teacher is often obliged to borrow the pupil's book when he hears him recite.

According to Mr. Hinsdale's studies of the United States census (see *Appendix A*) the sparsely settled region of the country includes, first, one-third of the whole domain entirely uninhabited or containing fewer than two inhabitants per square mile; secondly, an area of 1,688,827 miles with from two to forty-five inhabitants per square mile, leaving only 260,000 square miles containing more than forty-five to the square mile, and the 443 cities with an aggregate of nearly 19,000,000 people.

It happens that ungraded rural schools with a very small attendance are to be found even in the most thickly peopled states and often in proximity to cities. Rhode Island in 1895 reports 158 out of its 263 schools as ungraded and sixty-four of them as containing fewer than ten pupils each; three towns have in the aggregate thirty-nine schools averaging fewer than ten pupils. Vermont in 1893 reported 153 schools with six pupils or less each. Massachusetts in 1893-94 reported sixteen towns with an aggregate of nearly 100 schools with an average of eleven pupils. New York in 1894-95 reported 2,983 schools with fewer than ten pupils each and 7,529 with less than twenty. Other examples are mentioned in the report of the Subcommittee on Maintenance.

A school with ten pupils of ages from five to fifteen years, of different degrees of advancement, some beginning to learn their letters, others advanced from one to eight or nine years in the course of study, cannot be graded or classified to advantage, but must for the most part be taught individually. The beginner who does not yet know a letter should not be placed in a class with another who began last year and can now read lessons in the middle of the primer. It will not do to place in the same class a boy beginning numeration and another one who has already mastered the multiplication table. The beginner in grammar has not yet learned the technique, and is confused and discouraged by the instruction given to another pupil in his class who has already learned the declensions and conjugations.

Any attempt, in short, to instruct two or more pupils in a class, when there is a difference of a year's work in their advancement, results in humiliating and discouraging the less advanced and in making the maturer pupils conceited. Higher learning in the possession of a fellow-man seems to an illiterate person as something magical, or bordering on the miraculous: he can make combinations of thought which surprise those who are unused to them. The case is worse with the child in school. To him the elevation given by a year's study seems an endowment of nature and not a result of industry. Permanent injury to the pupils is very often occasioned by wrong classification. For not only does the

lower suffer from discouragement, but the higher pupil is necessarily injured by not being held to his best. The teacher is perforce obliged to adapt the lesson to the average of the class. This does not give enough work for the advanced pupil, although it gives too much for those below the average. There is not enough demand upon the first to continue the increase of his powers; he becomes indolent and stops growing.

For these reasons classification as above described ought not to be expected in the rural school; it must remain ungraded, and as a result the teacher must resort to individual instruction wherever there are intervals of a year or more in degrees of advancement between pupils, and this is the actual practice in perhaps the majority of such schools. The older pupils at least should have separate grammar, history, and arithmetic lessons.

It is understood by your subcommittee, as a matter of course, that even in a small school of six to ten pupils there may be two or more pupils of sufficiently near stages of progress to form one class—for example, two beginners in arithmetic, grammar, geography, or history. It may be that a dull pupil has already been studying arithmetic, grammar, or history for a quarter or a half year, and that a bright pupil just commencing the study would be able to keep up with him on a review from the beginning of the book; but it would not do to place a dull pupil commencing a study with a bright one who had already a half year's start in it. It often happens that pupils placed in the same class at the beginning of the year separate widely in power to learn new lessons before the middle of the year. In such cases a class should be broken up to prevent the twofold injury, namely, to the bright pupil by assigning him too short lessons, and to the dull pupil by assigning him more than he can well accomplish.

The teacher, even after forming classes in writing, reading, and spelling, has twelve to fifteen lessons to hear in a forenoon and nearly as many more for the afternoon. There is an average of less than ten minutes for each recitation. The ideal of the recitation or class exercise is that the teacher probe to the bottom the pupil's preparation of his lesson, and correct bad habits of study. If the pupil fails to master by sufficient industry the details—the facts and external items—the teacher counsels and reproves, requiring more work on the same lesson. If he finds that the details are mastered the teacher next tests the combinations, the thoughts that the pupil has used in connecting one fact with another and in seeing relations. Facts are connected so as to form a science when each one is made to throw light on every other fact, and all explain each. So a lesson is learned properly when the pupil can place each item in its systematic relation to the whole. He must understand the bearings of all; he must think out the interrelations.

Hence it happens that the good teacher is not satisfied with a memoriter recitation of the details of the lesson—still less with a word-for-word rendition of the text-book. Not the mere words of the book, nor even the disconnected facts or details which the words indicate, but to bring out the thought which unites these details and explains them, is the main object of the good recitation. But such a recitation requires time. The teacher cannot probe the pupil's knowledge in five minutes and correct his bad habits of study—nor in ten minutes. In the necessarily brief recitation of the ungraded school there is barely time to test the pupil's mastery of the external details of the lesson, the mere facts and technical words. It is for this reason, more especially, that the rural school has been the parent of poor methods of instruction—of parrot memorizing and of learning words instead of things.

At the beginning of this century only one-thirtieth of the inhabitants of the United States lived in towns of 8,000 people or upwards, and more than 90 per cent. of all the public schools were ungraded schools. The question has often been asked how it is that so many able men who became scholars and statesmen and professional men of eminence could have come from schools as poor as the rural school is said to be. Such eminent men as were produced in those times came from the rural school; there were few graduates from graded schools to compete with them. Of the men now living, past the middle age of life, nearly all received their early education in the rural ungraded school, because even as late as 1850 at least 80 per cent. of all the public schools were ungraded, there being only $12\frac{1}{2}$ per cent. of the population resident in cities. The rural school threw on the pupil the burden of his education. He was obliged to get his knowledge from books, such books as he could come to possess. Bright pupils do pretty well by themselves if given good books and taught how to read and to understand the technique used in the elementary books of mathematics, grammar, and the other liberal arts. Any country boy who acquires a love for books, who has access to the best ones, and studies them with energy, will by middle age become a learned man.

In the ideal classified school the teacher has two classes of pupils, each class containing within it pupils substantially at the same stage of advancement. The pupils of a given class recite together in all the branches, and the teacher has a half hour for a lesson and can go into the dynamics or causal relations of the facts and events treated.

Each pupil in a class learns as much from his fellow pupils as from the teacher direct; for the teacher draws out of the class its store of observations and reflections on the topic of the lesson. He shows up the one-sidedness of the preparation of the individual pupil; some have neglected this point and some that other point. Each has probably neglected

something. But, on the other hand, each of the diligent ones has brought forward something new that is valuable to his fellows. Each pupil finds through the recitation of the others that they have seen some things that had escaped his notice, although he supposed that he understood thoroughly the book presentation of the subject. His teacher suggests many new ideas and criticises the one-sidedness of the views of the pupils and also, it may be, of the text-book. All the statements of the book are brought to the test of verification—either through the child's experience or through other authorities. The child thus learns the method of study.

The ideal classified school can teach, and does teach, proper methods of study; the rural school cannot do this effectively in its five- or ten-minute recitations. It is because of this that wise directors of education have desired the consolidation of small schools into large schools wherever practicable. Two schools of ten each furnish on an average one-half as many recitations if united as they do when separate, owing to the possibility of pairing or classifying pupils of the same degree of advancement. Ten such schools united into one will give 100 pupils, with a possibility of classes of ten each, which can be more efficiently taught than before, because the pupil can learn more in a class than by himself. The class in the hands of a good teacher is a potent instrument for reaching all sides of the pupil's observation and reflection. Again, it is evident that five teachers can teach the 100 pupils united in one school far better than the ten teachers were able to teach them in the ten separate schools. If still further consolidation were possible and 400 pupils were united in one school, the classification might be improved to such a degree that a teacher could easily take the charge of two classes of twenty pupils, and ten teachers could do far better work for each pupil than was done by the forty teachers in the forty small rural schools before consolidation. Hence, economy becomes a great item in what are called "Union Schools."

Your subcommittee, in this discussion of the advantages of classifying and the corresponding disadvantages of the want of classifying, has assumed that as good teachers are supplied to the rural schools as to the schools of villages and cities—teachers of experience and skill, teachers of thorough academic and professional training in normal schools. It is assumed that states have made provision for good salaries in these ungraded schools, and that the license to teach requires professional training.

It is admitted as a fact, however, that the average rural school-teacher receives a small salary—not more than one-half that of the teacher in the city or large village. It is true, as reported by the Subcommittee on Maintenance of Schools, that some states, notably California, New Jersey,

Massachusetts, Rhode Island, and others to a greater or less degree, are providing, by a wise distribution of school money, to secure skillful teachers for these small, ungraded schools. But the evils above described as appertaining to instruction in ungraded schools are of such a character as not to yield to ordinary remedies.

Your subcommittee would call special attention at this point to the evil results that come from the attempt to remedy the defects of the rural school by forcing on it the system of classification found in cities. It is assumed that some of the benefits of the close grading possible in cities will be gained for the rural schools if they can roughly group the whole school into three or four classes. A rural school of thirty pupils comprising children from six to sixteen years of age, and covering different degrees of progress from beginners up to those of eight or nine years of schooling, are grouped, let us suppose, into four classes or grades—thus leaving intervals of two or more years of school work between a given group and the next one above it.

Your subcommittee has already pointed out the evils of classifying pupils in such a way as to bring together pupils differing in degree of advancement by intervals of two years. In fact, it has been found in city schools that one year's interval between classes is too much. The greatest danger of the graded school system in cities comes from holding back bright pupils for the sake of the slower and duller pupils. Next to this is the evil to the dull ones who are dragged forward at an unnatural rate of progress to keep up to the average rate of the class. The best pupils are engaged in "marking time," while the slowest are constantly spurred forward by teachers and parents to keep with their class, and their school years rendered miserable. Their self-respect is undermined by a false standard, that of mere speed in learning. The "marking time" injures the bright pupil by developing lax habits of study, while the forced marches of the slow pupil tend to destroy his poise of character. It has been found desirable, therefore, in city schools to make the intervals between classes as small as possible, so as to favor frequent transfers, namely, on the one hand, of bright pupils who are becoming capable of a greater amount of work into a higher class, and, if necessary, of those who are falling behind the average of the class into the next one below. Intervals of a half year are, therefore, adopted in a majority of the progressive city school systems, and many prefer intervals of a quarter of a year where it is practicable to make them, that is, where a large number of pupils makes possible the assignment of a requisite quota for each class. At the request of the subcommittee, Dr. E. E. White, an eminent authority on all that relates to school management, has furnished a statement of his views of classification in the rural school, illustrating them by a programme, which allows twenty-five minutes for each recitation. But

the intervals between the classes amount to two years' work, and inasmuch as he expressly provides for capable pupils, letting them "work ahead of their classes," he leaves the question where it is left by the subcommittee, unless the pupils are supposed to do their "advance work" without the teacher's supervision (*Appendix I*).

Your subcommittee would respectfully call attention to the danger of attempting to classify the rural school in imitation of the city school as peculiarly liable to happen in those schools where professionally educated teachers are employed.

The state and city normal schools have very properly laid stress on grading and classification, and on the methods of instruction by classes, and have ignored individual instruction. Their graduates have mostly sought and obtained places in the graded schools of cities and villages. In fact, the graded schools have outbid the rural schools for teachers having professional training. But, with the new movement to secure better teachers for rural schools by larger appropriations from the state, it has happened that many experiments of classification are attempted which result disastrously in the manner described, namely, by demoralizing, or destroying the courage and ambition of the exceptionally bright and the exceptionally dull pupils. The charge has been made that such rural schools as adopt a partial grading system are apt to become stiflers of talent by placing a premium on the average scholars, and holding back the promising youth of the district.

It is obvious from this that where state normal schools furnish teachers for the rural districts there should be conducted a special inquiry into the influence of the size of the school in determining the uses and the dangers of grading and classifying pupils.

There is no doubt, moreover, that the abuse of classification is the crying evil of the schools of villages and small cities. For the average pupil these village graded schools are uniformly good, but they often work injury to the exceptional pupils and are in this respect sometimes inferior to the ungraded schools in sparsely settled districts.

Your subcommittee would here explain that the technical terms "grading" and "classification" are often used, as above, to signify the same thing, namely, the dividing of the pupils of a school into groups or classes, each containing children of the same, or substantially the same, degree of advancement. But another meaning is often given to one of these terms. The work of the year, more or less, is also called the work of a grade, and the work of the elementary school, consisting of the first eight years' work, is divided into eight grades. It will be readily understood in this second use of the word "grade" as covering a year's work that a school may be graded, that is to say, its work may be arranged upon a programme of eight grades, each one of which requires a certain modicum of reading,

writing, arithmetic, geography, grammar, etc., for a year's work, and yet have only ten or twenty pupils, and perhaps these representing only three or four of the eight grades. By a graded school, as applied to such a state of things, is meant simply a school whose programme requires a regular sequence of studies and a full quota of studies for each pupil. If a pupil is at a certain degree of advancement in his arithmetic the programme of the graded system would place him also in a class correspondingly advanced in geography, history, reading, or other studies. But the small rural school has been called "ungraded" because it contains or may contain pupils of all grades, from the lowest to the highest, and consequently obliges the teacher to scatter his teaching force over a wide range of topics. The large school permits specializing by dividing the school in such a way that the pupils of one grade, or perhaps two grades, are taught by one teacher, the next one or two grades by another teacher, etc., permitting each teacher to specialize his work by giving him fewer topics to teach, and consequently insuring longer recitation periods and constant improvement in skill.

It is to be supposed that all schools will be graded in the sense that they will have a course of study, and that pupils will take up their branches of study in due order, and that these studies will be associated, so that a given degree of advancement in one study implies a given degree of advancement in another. What is properly called the correlation of studies presupposes that a certain degree of advancement in arithmetic corresponds to a certain degree of advancement in geography, reading, grammar, and other studies, all of these being determined within limits by the pupil's age. The word "grading," as a synonym for classification, is freely used by your subcommittee in this report, but it has discussed the topic indicated in the other and less frequent use of the word "grading" in that part of its report which follows, relating to the course of study.

THE COURSE OF STUDY.

Your subcommittee has assumed that the course of study in the rural schools should be substantially the same as that of the city schools. The differences should concern only minor details. It would, therefore, refer here to the report of the Committee of Fifteen for fuller details, and for the discussion of the grounds for selecting the several branches of the course of study. The course of study of the elementary school, whether urban or rural, should contain those branches which give the child an insight into the physical world and the means of conquering it for human uses, and also an insight into human nature and the motives that control the actions of men. The child should above all be taught how to combine with his fellows to secure reasonable ends. The windows of the soul are to be opened by the five branches of the course of study, thus enabling the

youth to see (1) the conditions of inorganic nature by arithmetic and the elements of physics and chemistry ; (2) the conditions of organic nature by studying plants and animals, the land, water, and air, and, besides these, the means that man invents and uses to connect each place with the rest of the world—these things belonging to geography. These two “windows” look out upon nature. The three others enable us to see man ; (3) literature and art as revealing human nature, arousing pure and high aspirations in the youth, and freeing him from narrow and mean views of life ; (4) the study of the structure of language, as found in the several subdivisions of grammar and rhetoric ; (5) history, which treats of the greater self—of man as a social whole.

These five branches belong to all schools, for they relate to the substance of humanity and are necessary for entrance upon civilization. Besides arithmetic, geography, literature, grammar, and history, there are collateral branches that each school should include—some of them information studies, such as oral courses in the sciences, in history, and in the arts—others of the nature of disciplines, or arts of skill, such as vocal music, gymnastics, manual training, the art of cooking, and some special attention to the elementary principles of the useful arts practiced in the neighborhood of the school, namely, farming, horticulture, grazing, mining, manufacturing, or the like (*Appendices G and H*).

In general these collateral branches should relate to the pupil's environment and help him understand the natural features of that environment, as well as the occupations of his fellow-men in the neighborhood. There are two things to understand in this matter of the geography of the environment. First, what it is and how it came to be—its land and water, its mountains and river valleys, its climate and soil, its productions, mineral, vegetable, and animal, and their peculiarities, how they differ from the productions of the rest of the world. Second, the means by which man procures from nature what is useful for himself and others, manufactures it and uses it, or exchanges it with his fellow-men so as to share in the productions of all climes and places, no matter how far distant. If a comparison must be made, this second topic of elementary geography is more important than the study of the natural features of the environment, because it is more immediately useful to the pupil and to the community in which he lives.

Let the pupil beginning the subject of geography commence with what is nearest to his personal and social interests, namely, with the products of the industries of his section. Let his studies go out from these products in two directions: first, to the natural conditions which make these products possible and which furnish in general the raw material ; secondly, in the direction of the purpose of this, the uses made of it, the things produced, the needs and wants of his fellow-men near and far ;

and the productions of the other parts of the world which are needed in his section to complete the supply of articles for food, clothing, shelter, protection, and culture. These items, including natural production and the human occupations of manufacture and exchange, may be said to be the chief theme of geography as it should be taught in the elementary schools. But the home environment is also to be kept in mind by the teacher throughout the entire course. Arithmetic should gain concreteness of application by its use in dealing with home problems. Literature should be pointed and applied, so far as may be without becoming provincial, to the pupil's environment; and so the other branches—history, and even grammar—should be brought home to the pupil's knowledge or experience in the same way. The pupil should have prepared for his study a list of the chief provincialisms of speech to which his section is addicted, and to the peculiarities of pronunciation in which his neighborhood departs from the national or international standard of usage.

The Committee of Fifteen has already advanced the opinion that the industrial and commercial idea is the central idea in the study of geography in the elementary schools. It leads directly to the natural elements of difference in climate, soil, productions, races of men, religion, political status, and occupation of the inhabitants, and it explains how these differences have arisen in some measure through cosmic and geological influences. It should be the teacher's object to make the pupil understand, just as early as his growing capacity admits, the peculiarities of his habitat, leading him to study the land and water formations in his neighborhood, and giving him power to recognize in the visible landscape about him the invisible forces that worked in the past, and still are at work in the present, molding these shapes and forms. On the basis of this knowledge of the elements of difference produced by nature in soil, climate, and configuration of the landscape, he should explain the grounds and reasons for the counter process of civilization which struggles to overcome these differences by bridging the rivers and tunneling the mountains—by using steamboat and railroad so as to unite each particular habitat with the rest of the world. He should see how man adapts to his needs the climate of each place by creating for himself a comfortable temperature, using for this purpose clothing and shelter, as well as fuels of wood and coal or derived from oils and gases, to protect from cold, and on the other hand utilizing ice or power fans, and creating easy access to summer dwellings on the heights of mountains, or at the seashore, to mitigate the heat. He turns the soil into a laboratory, correcting its lacks and deficiencies by adding what is necessary to produce the crop which he desires. He naturalizes the useful plants and animals of all climes in his own habitat. It is evident that the details of the process by which differences of soil, climate, and

production arise, important as these are, should not be allowed to occupy so much of the pupil's time that he neglects to study the counter-process of industry and commerce by which man unites all parts of the earth to his habitat, and progressively overcomes the obstacles to civilization by making climate and soil to suit himself wherever he wishes.

To restate this important point in a word, it is true that the deeper inquiry into the process of continent formation, the physical struggle between the process of the upheaving or upbuilding of continents, and that of their obliteration by air and water; the explanation of the mountains, valleys and plains, islands, volcanic action, the winds, the rain distribution, is indispensable to a comprehension of the physical environment. But the study of the cities, their location, the purposes they serve as collecting, manufacturing, and distributing centers, leads most directly to the immediate purpose of geography in the elementary school, for it is the study of that civilization in which the pupil lives and moves and has his being.

Keeping this human standpoint in view all the time as a permanent interest, the inquiry into causes and conditions should proceed concentrically from the pupil's use of food and clothing to the sources of the raw materials, the methods of their production, and the climatic, geologic, and other reasons that explain their location and their growth. It is important in this as in all matters of school instruction to avoid one-sidedness. Although the human factor should receive the most emphasis, special care should be exercised lest the nature factor should be neglected.

Your subcommittee would refer to the discussion of this subject under the head of "Geography" in the report of the Committee of Fifteen for further illustration.

There is not much use in requiring instruction in branches not yet reduced to pedagogic form. It is necessary that matters taught should be so systematized for school use as to admit of arrangement in a progressive series of lessons, the first of which alone would be useful if no second lesson followed, and the subsequent lessons each useful if the pupil studied none of the following.

Each lesson when arranged in a pedagogic form leads up to the following lesson and makes it easy to grasp, just as each stair makes the next one easy to climb. For example, the first lesson in cookery is an exercise in accurate measurement by spoonfuls and cupfuls, etc., and calculated not only to aid in the next lesson and make it possible, but also to be of use through life in the kitchen. Concerted efforts are being made in agricultural colleges to reduce to pedagogic form the arts of the farm, the garden, and the forest.

THE PROGRAMME OF STUDIES.

Your subcommittee deems it important to call attention again in this place to the prevalence of a misconception in regard to the relation of the course of study to the system of grading and classification. Every school, whether ungraded or graded, should have a course of study minutely arranged so as to show the average or reasonable rate of progress of the pupil of a given age and advancement in the work of the school; but, as has already been shown, it is not required that the school shall contain classes in each and all of these grades, nor indeed classes at any given stage of progress in the course of study as laid down for any particular quarter or term of the year. Above all it must be understood that in laying down the quarters or other divisions of a grade or year's work it is not to be expected or desired that the pupils entering school at the beginning of the school year in the fall should commence at the beginning of any grade's work. If a class consisting of two or more individuals (or of one individual only) left off the previous year in the third quarter's work of the fourth grade, it should begin its work after vacation at the point where it left off, unless there are special reasons which require a review of some portions of the work.

The course of study is the measuring rod or scale which is used to determine at what point in the eight years' work of the elementary course a pupil has arrived. It should not be used as the Procrustean bed on which to stretch the work of the school in order to give it uniformity. It has happened not infrequently in the past that upon the first adoption of the graded system the superintendent of city schools held annual examinations on the completion of the work of the grade, and for this purpose insisted upon the unreasonable requirement that all of the pupils in the school should have begun the work of a grade on the first day of the year and should be expected to finish the grade work in the fourth quarter of the year. This was said to be for convenience of promotion—all pupils leaving the work of one grade and passing to the next were said to be promoted. This fiction has effected serious injuries in city schools. The apparent reason for such a system was the convenience of the superintendent who desired to make only one set of questions for each grade, and hold his examinations all at one time. If he had adopted a plan of preparing an examination for any class of pupils at the time when they should have completed the work of the grade (whether in the first, second, third, or fourth quarter), such a system need not have existed. The false idea of promotion has also been the source of great evils. When a pupil has finished the work laid down in the course of study for any grade, he should begin the work of the succeeding grade at once, and it is not necessary to have any special examination. The class teacher is supposed to examine her pupils from day to day, for each recitation is

an examination revealing the pupil's understanding not only of the day's work but of his previous lessons; and the principal of the school is supposed to be well acquainted with the progress of his pupils. It is not necessary, therefore, to hold a general examination on the work of the grade if the class teacher and the supervising principal have performed their duty.

It is understood, too, that there should be much written work in the school, but that it should not as a rule take the form of competitive examinations. There is no other exercise in the school more valuable than that of written expression, but this should be limited chiefly to the review work of the pupil. The teacher, for illustration, should prepare questions at the close of the week, on the previous five or six days' work, such questions as bring out the most essential points and the principles which connect the details that have been studied. The pupil should be permitted to sit down by himself with plenty of time before him to write out his answers to these probing questions. By this means he learns gradually to collect his thoughts, and will do more thinking in connection with his written examination than in any other test or study in his school course. The written examination should not be postponed till the end of the year or to the end of the quarter, but should be a matter of at least weekly occurrence. It should be written work of a review character rather than examination of a competitive character.

While the course of study for the elementary school will cover eight years and be subdivided so as to show quarterly, semi-annual, or other stated progress, as already said, it will not be expected that the rural school, with its ten or twenty pupils, will have each and every grade represented; perhaps, for instance, there will be three pupils in the first grade, two in the second grade, one in the third grade, none in the fourth grade, two in the fifth grade, none in the sixth and seventh, and two in the eighth grade.

Your subcommittee assumes likewise that the discipline of the rural school should be strict though mild, like that of the city school. The fundamental school virtues of regularity, punctuality, and industry are auxiliary to moral virtues and form together a training of the will which is of great importance in producing the future good citizen. It must not be thought that, because a school is small, therefore the discipline is of less importance. The formation of habits of order, and of respect for the rights of the social whole, is necessary for the good citizen, whether of country or town.

REMEDIES FOR THE EVILS OF THE RURAL SCHOOL.

Your subcommittee would here point out that some of the evils of the rural school are due to its non-social character, its inability to furnish to

each of its pupils that educative influence that comes from association with numbers of the same age and the same degree of advancement. The rural school furnishes only a few companions to the youth, and those either above him or below him in grade of progress in studies. The remedy for the evils of the ungraded school are suggested by this very feature or characteristic. Radical remedies in this case must all contain some device to bring together pupils of different districts and bring into wholesome competition with one another the pupils of the same grade of advancement.

Transportation to Central Schools.—The collection of pupils into larger units than the district school furnishes may be accomplished under favorable circumstances by transporting at state or local expense all the pupils of the small rural districts to a central graded school and abolishing the small ungraded school. This is the radical and effective measure which is to do great good in many sections of each state. As shown already by the Subcommittee on the Maintenance of Schools, Massachusetts, in which the plan began under the town superintendent of Concord, Mr. John B. Tileston (about the year 1878 in Concord, or even earlier in the town of Quincy, see *Appendix F*), paid in 1894–95 the sum of \$76,608 for the transportation of children from small rural schools to central graded schools—213 towns out of a total of 353 towns and cities using this plan to a greater or less extent, and securing the two-fold result of economy in money and the substitution of graded for ungraded schools. The spread of this plan to Maine, Vermont, New Hampshire, Connecticut, Rhode Island, New Jersey, Ohio, and some other states (see Report of Bureau of Education for 1894–95, pp. 1469–82) demonstrates its practicability. Experiments with this plan have already suggested improvements, as in the Kingsville experiment in Ohio, where the transportation reached in all cases the homes of the pupils and yet reduced the cost of tuition from \$22.75 to \$12.25 a year for each of the fifty pupils brought to the central school from the outlying districts.

Improvement of Roads.—Wherever this plan of abolishing the small ungraded school is practicable it is by far the best remedy to be applied.

But there will remain large numbers of small ungraded rural schools in which the plan of transportation is not feasible by reason of great distances and poor roads. The Agricultural Department is seconding the efforts of many states to improve roads in rural districts. In many places road improvement is a necessary condition previous to the betterment of rural schools.

Special Appropriations for Small Rural Schools.—The device of securing skilled and professionally trained teachers by providing, as in California, a sufficient salary for each district, no matter how few its pupils (see *Appendix C*), has already been described by another subcommittee (that

on maintenance). It is undoubtedly a wise measure, provided it does not hinder the consolidation of districts through the adoption of the Massachusetts plan. If it works to preserve the small ungraded school in places where consolidation is feasible it will in the end be an injury to the cause of rural schools. Your subcommittee, therefore, ventures to call attention to the importance of adopting such laws as are operative in California, New Jersey, Massachusetts, and New York, for the better remuneration of rural school-teachers, but with a proviso that makes it a pecuniary advantage to a town to abolish its outlying ungraded schools and furnish transportation to a central school.

Concentration of the Higher Grades of Pupils.—Where transportation of the whole school is not feasible it sometimes happens that the teaching may be very much improved by the transfer of two or three of the pupils of the higher grades who consume very much of the teacher's time. By transportation of these two or three pupils to the central school the teacher thus relieved may find time for much better instruction of the pupils in the lower grades who remain under his charge.

School Exercises at the Town or County Centers.—For the small ungraded schools that cannot be abolished, perhaps one-third of all the schools in the United States at the present time, your subcommittee suggests the provision of occasional meetings at town centers or county centers, perhaps twice a year or oftener, under the direction of township, union township, or county superintendents, as the case may be. The meeting should have as its primary purpose the bringing together of advanced pupils—say sixth to ninth years' work for examination and comparison, the examinations to be chiefly written. Certificates should be given to those who complete the elementary course of eight years as a whole or in any one of its branches, permitting a pupil who passes in one branch this year, say in grammar or history, to pass in another branch at a subsequent examination whenever he presents himself. These examinations have been in operation in several counties of New Jersey for nearly twenty years.

This plan has an interesting and profitable illustration of many of its features in the operation of the Boxwell law in Ohio (State School Commissioner Corson, Report 1895-96). It was also carried out years ago in many particulars by Superintendent Wade in West Virginia.

The Proper Use of Competitive Examinations.—It is understood by your subcommittee that the prejudice against competitive examinations is well grounded. It often happens that schools are subjected to mere mechanical drill in order to secure a higher per cent. in this sort of examination. High per cents. cannot be obtained by entire classes upon work which requires not only a knowledge of details, but a knowledge of the causal relations underlying them. Your subcommittee desires to say

that it does not recommend indiscriminate competitive examinations, but that it recommends written work and examinations which test the thinking ability of the pupil and lead him to considerate inquiries and accurate statements. High per cents. on anything except mechanical work, such as spelling, the multiplication table, the tables of weights and measures, and paradigms, are not desirable.

The plan of township and county union exercises of rural schools above described obviously includes the good feature of social interconnection, each pupil of the remote districts working consciously in combination with many others towards a common end, and all the pupils stimulated both in school and out of it by this social motive.

Promotion of Home Reading.—The excellence of the Chautauquan plan for the promotion of home study lies in the same feature. Each reader is stimulated and encouraged by the consciousness that he is working on a task common to the endeavors of a vast multitude. The task is dignified and ennobled by such social participation. The youth in the rural district is by this plan to be made a home student, and his education is thus to be extended beyond the school. He may have obtained his first recognition in the township examination while he was a member of a rural school. He is an object of semi-annual inquiry on the part of the township or county superintendent for years afterwards. Each new teacher that comes to the rural school is charged by the superintendent with the duty of looking up the young men and young women who made a record in the central examinations, and inquiry is made after their continued reading and study. This in itself will be a powerful influence to cause young people to continue self-culture by studying a prescribed series of books in years subsequent to the school period. It will add dignity and self-respect to the rural school-teacher who is charged with the work of making friendly inquiry into this school extension, and of offering help in case of application from any of the parties interested.

Reviewing Studies.—The rural school with its five-minute or ten-minute recitations cannot do much in the way of reviewing previous lessons. The good teacher in a graded school carries on from day to day a review of previous lessons. He gathers up and connects with the lesson of the day all the essential threads that bind it to what has gone before. It is this work of reviewing that will be assisted by the occasional examinations at the township center.

Moreover, the old evil of the rural school, that of having all pupils begin at the beginning of the book at the commencement of each annual term, will be removed. For the superintendent will have a record of the standing of the advanced pupils and will require a report from the new teacher as to their programme of study.

This plan also points to the utility of more written work in the rural

school. A set of questions prepared beforehand and given to a pupil at the close of the week, as above recommended, will test not only his knowledge of the superficial details of his week's work, but also of his understanding of their deeper connections and principles, as no oral recitation could be made to do.

School Extension.—In this connection another branch of what is called “school extension” or “university extension” is practicable. Home reading can be managed from the same center, namely, the rural school. Everything that adds social importance to the rural teacher may be of service. It is evident that those pupils who have graduated from the public school and have entered upon the business of life may profitably carry on useful courses of reading in the various departments of literature and art, science, and history. The township or union township superintendent, in conjunction with the county superintendent or state superintendent, should set into operation as far as possible courses of home reading, employing the aid of the rural school-teachers to carry this into effect. A record containing the names of the persons who have undertaken home reading, the names of the books completed, and the dates of such completion, will form an interesting record. This home reading, moreover, should have its social gatherings in which there are discussions of the contents of particular books that are read. For this purpose the township superintendent or the county superintendent may select specially well-fitted persons who shall present analyses of the books and discussions of their contents. It is desirable that the course of home reading shall not be one-sided, but shall move in each of the three directions: literature, including poetry and prose; science, looking towards the organic and inorganic kingdoms of nature, the plant, the animal, and the details of matter and force; and towards archæology, ethnology, and sociology, and politics, history, biography, and art. One must not be altogether dissatisfied if it is found that the novel is the chief book in demand, especially in the first five years of the home reading circle. In our day the novel discusses every question of history, politics, sociology, and natural science. The old-fashioned novel which describes manners has its great use, too, in the fact that it gives to the people of whom we are speaking, the people of the rural districts, a ready knowledge of manners and customs of polite society. In this respect it is sometimes more useful than books of science and history.

Lancasterian or Monitorial Plan.—The topic of written work suggests a further topic of great importance in the rural schools, namely that of the occasional employment of older pupils in the work of supervising the exercises of less advanced pupils—a committee of two or three pupils to examine and mark the papers written by those studying geography; a monitor assigned for some hour in the day to inquire into the work of a

backward or dull pupil who has reached a difficult place in arithmetic; a similar assignment of a pupil to help another in a grammar lesson or a history lesson; these are cases where the monitorial or Lancasterian system may have greater or less utility. It cultivates directive power and self-respect in a pupil to be called to the aid of the teacher. But the dangers of it are well known. No weak disciplinarian should try the monitorial system. On the other hand, every strong disciplinarian in the ungraded school can use some features of it to advantage.

The bane of the Lancasterian system was its use to furnish cheap assistant teachers in graded schools. It resulted in bringing into the schools a class of so-called "pupil-teachers," educational novices in the place of experienced and professionally trained teachers who ought to be everywhere employed in graded schools. Limited entirely to ungraded schools and to teachers with disciplinary power, the older pupils may profitably be employed to help in the work of the school. But they should not take up any work continuously—it should all be occasional, inasmuch as every thread of the school work must come under the eye of the schoolmaster frequently—daily, or nearly as often. If he has asked an older pupil to explain a point in arithmetic to a dull pupil, the latter will show the degree of efficiency of that help, in the first recitation after it.

Another rule for the guidance of the teacher is: never to employ a monitor unless such assignment of work is useful both to the pupils taught and to the pupil-teacher.

A teacher may gain time needed for assistance of the advanced pupils in some important study by requiring in advance the assistance of these pupils in some of the following forms:

- (1) Marking examination papers.
- (2) Helping pupils over some difficulty in arithmetic, grammar, or other branch having strict logical sequence in its topics.
- (3) In explaining the thought of a reading lesson to a backward pupil.

The effort of one pupil to explain to another a difficult passage of literature is one of the most profitable of all school exercises. There will undoubtedly be crudities in the explanation, but this will all come out under the teacher's subsequent tests, and the exercises will increase in profit through the final explanation given by the teacher.

- (4) In assisting to test mere memory work on the part of a pupil, as in the case of the spelling of difficult words, the learning of paradigms in grammar, the learning of the required tables of weights and measures, the multiplication table, etc., or in any other necessary data that have to be fixed in the memory. In general, what is nearest to mechanical work may be supervised at times by monitors, and monitors may be useful in assisting in the preparation of thought lessons that are to come later

before the schoolmaster, as, in the example given, the getting-out of the thought of a reading lesson—or even of a history lesson.

In conclusion, your subcommittee would lay chief stress on the function of school extension, above sketched in outline, as the most profitable line of work for the improvement of the rural school—both pupils and teachers.

WILLIAM T. HARRIS, *Chairman*,
ADDISON B. POLAND,
LLOYD E. WOLFE.

Mr. Poland, while concurring in most particulars, desires to add the following statement:

While I concur most heartily in nearly all of the recommendations made by the Subcommittee on Course of Study, etc., I feel compelled to state that, in my opinion, the report somewhat exaggerates the difficulties and dangers of attempting to classify pupils in rural schools. It fails to discriminate between rural schools of ten pupils each and schools of a larger number, say thirty to sixty pupils each.

The general argument is based upon conditions that exist in a "school with ten pupils of ages from five to fifteen years;" and the conclusion drawn is that "for these reasons, classification as above described ought not to be expected in the (any) rural schools."

The conclusion, it seems to me, is altogether too general. My own observation of rural schools in the states of Massachusetts, New York, and New Jersey has led me to believe that their efficiency as a rule is in direct ratio to their wise and careful gradation; that, in fact, the best-graded schools are the most efficient. I am speaking, of course, of rural schools containing twenty-five pupils and upwards, where partial grading, at least, is generally believed to be practicable. Grant all the cases of individual hardship that the report truly affirms of misgraded pupils, yet the total loss of efficiency is immeasurably less than where no grading is attempted. Economy of teacher's time, longer recitation period, class emulation, etc., more than offset the disadvantage, often only theoretic, of a pupil's working in advance of his point of "maximum efficiency."

I am not, therefore, in full harmony with the report, in so far as it may have the effect to discourage teachers from attempting to classify pupils, whenever and wherever practicable.

A. B. POLAND.

Mr. Wolfe, while agreeing in many points with Mr. Harris, desires to make the following statement:

Perhaps my opinion may be characterized as explanatory or supplementary rather than dissenting. Believing with Dr. Harris that the chief

aim of the report of the Committee of Twelve is to provoke thought, I make this contribution to that end. Complete unanimity no more exists among the members of this committee than among the great army of teachers for whom the report is prepared; nor is such unanimity desirable. The subject will be treated under the following heads:

(1) *The present condition and trend of rural-school grading and classification in the states of the Union*; (2) *Dr. Harris' plea for individual instruction rather than the instruction (in the same class) of pupils who are more than one year apart in their advancement*; (3) *the underlying pedagogic principles that seem to justify Dr. Harris in opposing the doctrine of his report to a body of opinion on classification and grading which is gathering volume and momentum with each decade*; (4) *objections to the doctrine of the report*.

1. Recent decades have witnessed a strong movement in many of the states of the Union to model the rural school course of study, grading, and classification after the ideal of the city graded school. Several states prepare, publish, and distribute state courses of study for rural schools, and send out, at stated times, uniform examination questions prepared with reference to the course of study and the system of grading and classification set forth therein. In other states, the county school authorities issue the rural school course of study. In still other states, the school journals and associations hold up the grading and classification of rural schools as an ideal to be obtained in the near future.

2. The burden of Dr. Harris' report is: "Be ye not unequally yoked together." Just here a word of explanation of the expression "the ideal of the city graded school." This ideal is a course of study divided into at least eight yearly divisions, or grades of work, the pupils of the school being divided into eight corresponding divisions, or grades. A school is graded when the pupils of a certain year, or grade, are pursuing the work of a corresponding year, or grade, in all the branches. It is, therefore, evident that the word "grade" has two meanings—a grade of work and a grade of pupils. All pupils who are graded are classified, unless there be but one pupil to the grade. But all pupils who are classified are not necessarily graded. A pupil without classmates is graded when he pursues all the work of the corresponding grade, and yet he cannot be said to be classified. Pupils may be grouped in classes, and thus be classified, and yet not be graded, because they may be pursuing work of different grades. Dr. Harris is not opposed to a course of study for rural schools, nor to dividing that course of study into eight divisions, or grades of work, nor yet to grouping pupils into classes, or grades, provided classmates are not more than a year apart in their advancement. But most rural school courses of study necessitate the grouping of the pupils of the fifth and sixth years of advancement into one grade; also, the grouping of the pupils of the seventh and eighth years into another grade. It thus happens that

not only are pupils two years apart in their advancement yoked together in the same class and grade, but that, on alternate years, they are obliged to study the sixth year's work before the fifth, and the eighth before the seventh. It will thus readily be seen that the main thought of Dr. Harris' report is a standing protest against the grading and classification of pupils in the rural school as now practiced in many of the states.

3. We are now to inquire what pedagogic principles can be invoked to justify Dr. Harris in throwing the whole weight of his influence against the evolution of the ungraded country school into the graded school. And first, we must bear in mind that the subject of the report of Dr. Harris is "Instruction and Discipline in the Rural Schools." First, *efficient instruction must be adapted to the capacity of the learner, otherwise it cannot be grasped and assimilated.* Second, *other things being equal, instruction is more efficient when given to pupils associated in classes than when given to individual pupils.* Not only does a pupil gain much information from his classmates during a recitation, but the recitation gives him an insight into the individual capacities and peculiarities of those among whom he is to succeed or fail in professional or business life. Third, *efficient instruction requires a reasonable length of time for a class exercise.* In a city graded school, with at least one teacher for each grade of work, the three principles—adaptation of instruction to the capacity of the learner, grouping of pupils into classes, and a reasonable time for recitation—can be conserved. But, in a rural school with one teacher, to maintain one of these principles is to sacrifice another. The principle of the adaptation of instruction to capacity can be adhered to by dividing the pupils into eight grades of advancement; but such division gives a minimum time for recitation and a minimum association of pupils. If, however, pupils of the third and fourth, fifth and sixth, seventh and eighth years of advancement be grouped into three corresponding grades, we secure a longer time for recitation and a larger measure of association, but we violate the principle of adaptation of instruction to capacity, thus associating, in the same grade and class, pupils two years apart in their advancement. It thus appears that the problem of the most efficient instruction in a rural school with one teacher is one of maxima and minima. The principle of adaptation of instruction to capacity forever antagonizes the other two. A maximum adherence to it means a minimum adherence to the other two, and *vice versa*. Perfect adaptation of instruction to capacity would necessitate a grade for each pupil. Dr. Harris' report shows that he feels that, when pupils one year apart in advancement have been grouped in the same grade, this great principle of adaptation of instruction to capacity has been strained to its utmost limit, and that any sacrifice thereafter must come from other antagonistic and minor principles. His report throughout shows that he considers adaptation of instruction to

capacity the paramount and controlling principle; and the fact that he has made this the burden of his report shows with what trained acumen he has brushed aside the trivial and subsidiary, and has laid grasp upon the vital and fundamental. A still more universal principle underlies this valuable report. It is this: that the success of an institution of any kind — political, religious, economic, educational — depends upon its adaptation to its environment. A republic is, no doubt, abstractly the best form of government; but equally true is it that, under certain environment, an aristocracy or a monarchy is better than a republic. I take it, then, that Dr. Harris has been a spectator of this evolution of the rural school, with its peculiar environment, into the city graded school, with a very different environment, till he has said to himself: "This is a forced and artificial evolution." Having arrived at the conviction that the rural school with one teacher cannot, without injury, be metamorphosed into a graded school, Dr. Harris addresses himself to the problem of changing the present rural school conditions, (1) through transportation of pupils and (2) through pupil-teachers. Now this goes to the very heart of the question. For, through the transportation of pupils to central schools, the rural school conditions are transformed into city school conditions, and instruction can then proceed in harmony with the three principles above discussed. Or, if pupil-teachers are employed, or if the pupils of the higher grades — fifth, sixth, seventh, and eighth, or seventh and eighth only — be transported, the rural school condition will be in a measure removed, and instruction can proceed more in harmony with these principles. It is true that transportation of pupils now seems practicable only in a small portion of the territory of the United States, and that pupil-teaching meets with but little favor among rural school-teachers and pupils; but a careful study of the report of Dr. Harris will, no doubt, lead to a larger use of pupil-teachers and a much wider extension of pupil transportation, especially in the upper grammar grades. During the last few decades there has been in operation in many of the western states a strong evolutionary force, which has eliminated most of the high-school branches from the majority of the country schools. In such cases, the pupils who have completed the eight years' work of the country school are expected to find high-school instruction elsewhere at their own expense of tuition and transportation. May not this same evolutionary force, in its own due time, similarly eliminate from the rural schools the work of Grades 7 and 8? Whether such rejected pupils will be transported or not will depend upon the sentiment of the community. In favor of the ultimate transportation of not only Grades 7 and 8, but of higher grades, is that great socialistic force that has given birth to our free-school system, our postal system, and our asylums for physical, moral, and mental delinquents. Having addressed himself to the modification

of rural school environment through pupil transportation and pupil-teachers, the Doctor finds himself face to face with a great body of rural school conditions which are unmodified and at present unmodifiable. It is here that he makes his plea for individual instruction rather than the instruction, in the same class, of pupils who are more than a year apart in their advancement.

4. The branches of the eight-years' course of the rural school are : writing, drawing, music ; physiology, grammar, civil government ; spelling, language, geography, history ; reading ; arithmetic. We shall be able to get a better understanding of the subject if we suppose a city school of eight grades, four rooms, and four teachers to be suddenly reduced to one-fourth its former number of pupils, rooms, and teachers. There will then remain one teacher, one room, eight grades of pupils and eight grades of work, and, say, forty pupils ; that is substantially rural school conditions. This one teacher now finds that, while he has no more pupils to instruct than he had before, these pupils are scattered among the eight grades. If he adheres strictly to the former graded structure of the school, keeping each grade of pupils distinct in all the branches (allowing six recitations a day to each grade), he will have eight times six, or forty-eight, classes. This gives him an average of about five minutes for a recitation period. The inadequacy of this time for the development of a subject needs no comment. He must group these scattered pupils into classes, largely ignoring grades, and many of these classes will contain pupils from different grades. By almost unanimous consent it is agreed that the pupils of the eight grades can be grouped, for general exercises, in writing, drawing, and music, requiring but one recitation period for each branch. One recitation period will answer for each branch in grammar, physiology, and civil government ; two recitation periods each in spelling, language, geography, and history ; four in reading ; five in elementary numbers and arithmetic. This gives twenty-three recitations, ranging from ten minutes in the lowest grades to twenty in the highest. It will be observed that I state above that many of these classes will contain pupils from different grades. Here appears the significance of my definitions of *class* and *grade* in the beginning of this discussion—definitions on which the teachers of this country are far from being a unit. The fundamental principle underlying *grading* is symmetrical development ; the fundamental principle underlying *classifying* is harmonious development. Symmetrical development aims to advance the pupil with equal pace in all the branches ; harmonious development aims to advance him in harmony with his individual capabilities. Many of the pupils of our best graded schools are classified in violation of the principle of harmonious development. This statement takes no note of mistakes in grading, by which pupils are assigned to the wrong grades. The grading of schools in accordance with the principle of symmetrical

development necessitates a violation of the principle of harmonious development. I have reference to those pupils who are assigned to the right grade in a majority of the branches they pursue, but who, in one or more branches, belong to grades above or below the one to which they are assigned. It, therefore, follows that the reorganization consequent upon transforming the four-teacher school into the one-teacher school would bring some pupils into classes better suited to their abilities than the classes to which the graded system had assigned them, thus bringing about a classification more in harmony with the principle of adaptation of instruction to the capacity of the learner. Classification and its correlative principle of harmonious development are the corner stone of the rural school; grading and its correlative principle of symmetrical development are equally fundamental to the city school. In a graded school the pupil is assigned to classes belonging to one grade only; in the country school he is assigned to classes adapted to his capacity, regardless of the number of grades represented by these classes. I institute no comparison here as to the relative merits of the principles—harmonious development and symmetrical development—but simply state the fact of their relations respectively to the city and rural schools.

If practical adaptation of instruction to the capacity of the pupil were really attainable in the graded school, I should hesitate to recommend a classification that would group, in one class, pupils more than a year apart in their advancement. But such adaptation is largely ideal and theoretical. However well the school be graded, the strongest pupils and the weakest are separated by a long distance in the character, or grade, of their work. Whether in the primary, the grammar, the high school, the college, or the university, a certain per cent. of the students do most of the highest order of work. These strongest pupils discover and develop the deepest relations. The weaker pupils soon learn to repeat the stereotyped expressions of these relations, and to store them away in their memories to be fished forth at stated intervals by the written test. The apostle Paul, that he might not offend his brother, would eat no more flesh while the world stood; but a large per cent. of the students of all grades, not from fear of offending their brother, but from their very mental constitutions, abstain, with equal fidelity, from the strongest mental diet. I can select, at random, one-half the pupils from Grades 6 and 7 of a city school, and put them to studying, indifferently, North America, South America, Europe, or Asia, and the former leaders in Grades 6 and 7 respectively will still lead. What is true of geography is true of history, civil government, physiology, spelling and reading, and, in a measure, of grammar and arithmetic. Certain pupils are mentally built for accuracy, clearness, depth, and power; others, for relative inaccuracy, obscurity, shallowness, and weakness. A rule requiring, as a condition of promotion,

that all pupils, of any certain grade, should do as high an order of work as is being done by some of the pupils of that grade, would virtually stop the wheels of promotion. Many of the pupils would never reach a higher grade; many others would do so only after repeated attempts and failures.

The gist of Dr. Harris' objection to grouping pupils who are more than a year apart in their advancement is that the more advanced pupils will be kept marking time, while the less advanced will be dragged along at an unnatural rate. My answer is that the stronger pupils will do the higher order of thinking, just as they always do, while the weaker pupils will do the lower order of thinking, as they always do, getting some knowledge from the books, some from the teacher, and some from their stronger classmates. The rural school has the advantage over the city school in that its pupils learn much from the recitation of classes to which they do not belong. In a graded school, the walls of the schoolroom shut pupils out from what is being recited in other grades. In a rural school, the pupil can listen to the recitation of any grade. You tell me that this is absorption, that the pupil gets this outside knowledge at the expense of the preparation of his own lessons, and that the practice of listening to other recitations militates against the principle that a great aim in education is to learn to master the printed page; but it is nevertheless the testimony of many of our greatest educators that the knowledge thus obtained by them in the country school was invaluable. The mind has strange and subtle methods of threading its way to knowledge, not always in harmony with the pedagogue's theory. What teacher in arithmetic (who has had the courage, temporarily at least, to lay aside his cut-and-dried solution-formulæ) has not been surprised and delighted at the ingenious methods different pupils have of solving problems? What master of the topical method in history, civil government, or literature has not marveled at the rich relations revealed by pupils when left free to take their own initiative? A nation does not postpone its entrance upon a career of republican government till all its members are ready for self-government. The members of a church are not of equal intellectual or spiritual caliber, nor are the members of a family; yet they are associated in one class—the state, the church, the family. In actual life, persons of all degrees of advancement behold alike the same procession of the heavens, the same succession of seasons, the same world-happenings; but all do not get the same kind and amount of information from the marshaling of the constellations, the budding and fruiting of spring and summer, and the drama of events daily unfolding. I grant that the examples above given are not identical with the thing to be exemplified; but they present important elements of similarity. Finally, I am fully convinced that the rural school conditions necessitate a departure from the doctrine so ably laid down by Dr. Harris, and I believe principles can be

found to justify such departure. Whether or not I have found these principles and set them forth in this supplementary report is another question.

L. E. WOLFE.

APPENDIX A.

SOME SOCIOLOGICAL FACTORS IN RURAL EDUCATION.

[From a paper read before the Department of Superintendence of the N. E. A., at Jacksonville, Fla., February, 1896, by B. A. Hinsdale, Professor of the Science and the Art of Teaching in the University of Michigan. (See "Journal of Proceedings and Addresses of the Thirty-fifth Annual Meeting, held at Buffalo, July, 1896," pp. 261-9.) A discussion on the same lines, but much fuller, will be found in Dr. Hinsdale's work, entitled "Studies in Education," pp. 313-38.]

First we will give our attention to density of population. The importance of this element in the rural-school problem becomes obvious at a glance. In populous districts fewer schools and districts relatively are called for, while, at the same time, owing to the larger numbers and the more varied attainments of the pupils, the system can be more fully developed. The school and the home, under the present system, cannot be far apart; otherwise children will attend the school with difficulty, or not at all. Once more, the interest and enthusiasm of pupils and teachers depend directly upon the number and the ability of the pupils present. For the majority of children individual instruction, or anything closely approaching it, is not to be commended. Aristotle condemned such instruction on political grounds. It may also be condemned on pedagogical grounds. Children need the inspiration of numbers. Besides, numbers contain ethical value. As a rule, you can no more make a good school out of a half dozen pupils than you can make a powerful galvanic battery with one or two pairs of plates. Then, again, the question of cost is directly involved. Where pupils are scattered and the schools are small education is necessarily very expensive, provided it is at the same time good. Generally, however, it is bad.

To illustrate: Some twenty years ago I investigated one of the old townships in northern Ohio with respect to its school condition, and with these results: Schools, 7 in number; youth of school age enumerated, 191; pupils enrolled in schools, 103; average daily attendance, 71; average size of schools, 10 pupils; largest enumeration in any district, 85; smallest, 12; largest enrollment, 37; smallest, 3; largest daily attendance, 25; smallest, 3; largest cost per pupil in any district, \$42.60; smallest, \$18.56. The average cost per pupil the same year in the state was \$13.36. Argument is not needed to show that this was an inefficient and wasteful township system of education. How much better it would have been if the seven schools could have been consolidated, thus putting all the pupils under two or three teachers! I remember a school in Ohio, within sight of my own home, that was kept in session a whole summer with but two pupils in attendance, and those two were all there were in the district. My father, who was a man of close observation, was in the habit of remarking in my boyhood that a farm of 1,000 acres situated all in one school district would, as a rule, spoil the school, by reducing the number of children, and I have often seen confirmation of his statement.

The Census Office at Washington considers those parts of the country that have a population of less than two to the square mile unsettled. These parts amount to a little more than one-third of the whole, not including Alaska. Once more, in constructing its tables and maps to show density of population, the Census Office excludes the cities, or those centers of population containing 8,000 persons or more. In 1890 the second of the two rules excluded 443 centers of population, containing an aggregate of 18,835,670 inhabitants, or 29.12 per cent. of the whole.

The whole country, less the parts excluded by the first rule, the Census Office has divided with reference to certain *maxima* and *minima* of population, as follows:

2 to 6 to a square mile,	-	-	-	592,037 square miles.
6 to 18 "	"	-	-	394,943 "
18 to 45 "	"	-	-	701,847 "
45 to 90 "	"	-	-	235,148 "
90 and above	"	-	-	24,312 "
Total,	-	-	-	1,947,287 "

The superintendent of the census makes some interesting remarks upon the economical significations of these statistics, as follows:

"These limits define in a general way the extent and prevalence of various classes of industries. The first group, two to six to a square mile, indicates a population mainly occupied with the grazing industry, or a widely scattered farming population. The second group, six to eighteen, indicates a farming population with systematic cultivation of the soil, but this either in an early stage of settlement or upon more or less rugged soil. The third group, eighteen to forty-five to a square mile, almost invariably indicates a highly successful agriculture, while in some localities the beginnings of manufactures have raised into this group a difficult farming region. Speaking generally, agriculture in this country is not carried on with such care and refinement as yet to afford employment and support to a population in excess of forty-five to a square mile. Consequently the last two groups, forty-five to ninety and ninety and above to a square mile, appear only as commerce and manufactures arise, and personal and professional services are in demand."

He might have introduced education with equal propriety. The statistics given throw a direct light upon school material, and an indirect one upon school resources. Much the same may be said of churches and the intellectual and moral instruments of society generally. There is, therefore, cause for deep regret that such large areas of country are falling off in population. From 1880 to 1890 more than 400 counties, or about five times as many as there are in the state of Ohio, suffered in this way.

But, secondly, the character of the population must be considered as well as its number. It is evident that a certain homogeneity is very conducive to public education. The children of such a community can be educated together, and hence more cheaply and more effectively. One system of schools suffices for all classes. But if the children must be segregated in different schools according to non-educational tests, one of two things will certainly happen: either public education will become expensive, or it will become inferior in quality. Looking at the subject from this point of view merely, it is unfortunate that in large portions of the United States popular education should be embarrassed by the race question. In 1890 the per cents. of white and colored population, respectively, were distributed in the five great divisions that the Census Office recognizes in the following manner:

North Atlantic States,	-	-	-	98.4	1.6
South " "	-	-	-	63.2	36.8
North Central States,	-	-	-	98.0	2.0
South " "	-	-	-	68.3	31.7
Western States,	-	-	-	94.8	5.2

If per cents. for the states severally were given the contrasts would be still more striking. The per cent. of colored people in New Hampshire, for example, was .18, while in South Carolina it was 59.87. Now there is little probability that the educational value of such statistics as these will be exaggerated. The presence of a large colored population in any state or other community tends to affect popular education unfavorably in three ways: to increase its cost, to make its quality inferior, and to lower both the intellectual and moral level of society and its money-earning capacity.

In one respect the rural parts of the country are better off, upon the whole, than the cities. Religious differences do not disturb popular education to the same extent. Relatively, parochial schools are much fewer in number.

In the third place, the wealth of society is a very important factor in education, and particularly in rural education. Naturally the per-capita wealth of the several divisions of the country varies greatly. In 1890 these were the averages :

North Atlantic States,	- - - - -	\$1,132 per capita.
South Atlantic States,	- - - - -	579 "
North Central States,	- - - - -	1,129 "
South Central States,	- - - - -	583 "
Western States,	- - - - -	2,250 "

In the North Atlantic states the maximum was in Rhode Island, \$1,459 per capita ; the minimum in Maine, \$740. In the South Atlantic states the maximum was in Maryland (excluding the Federal District), \$1,043 per capita ; the minimum in South Carolina, \$348.

Now it is perfectly well understood that a good modern system of state education can be supported only at great public cost. Still more, the cost is all the time increasing. Our total expenditures for this purpose the last twenty years have been mounting upward by leaps and bounds. At present the money expended by the states together is \$175,000,000 annually, which is more than twice the cost of supporting the national government before the Civil War. Education has come to be a great item in the budget of every highly civilized country in the world.

Fourthly, the character of the population in respect to its money-earning power must be taken into the account. The size of the average family and the relative number of taxpayers, or the adult males, and their productiveness as economical agents, all become educational factors of much importance. If families are large, the number of children to be schooled is proportionally great ; which, under some conditions, would add to the efficiency of the schools, and under other conditions would increase their cost. Then the larger the relative number of adult males, and the greater their producing power, the higher their intelligence and educational needs, and the greater their ability to provide the sinews for educational warfare. We need not enter into the correlation of the size of the family and its material condition. It still remains true, however, as in the time of Solomon, that the destruction of the poor is their poverty. In respect to educational possibilities there is the greatest difference between a community having a high ratio of adult male population of large wealth-producing power and a community having a small ratio of such population with small wealth-producing power. The country taken together in 1890-91 showed surprising variations in this respect. There were 91.4 taxpayers for each 100 children six to eighteen years of age ; but in different sections the ratio varied from 65.9 to 100 in the South Central states to 156.7 to 100 in the western states. In South Carolina there were but fifty-five adult males to earn the money with which to school 100 children, thirty-two of whom were colored men. Comparing the taxpayer factor with the per-capita tax for education, some very striking results are obtained. Dr. Harris has shown¹ that in Montana a contribution of \$5.85 per taxpayer furnished in 1890-91 \$16.02 for each child of school age, while in Texas a contribution of \$6.55 per taxpayer produced a result of only \$4.48 for each child. Mississippi, after raising per taxpayer about half what Nevada raised, had only about one-eighth as much as the latter state for each child of school age. The causes that affect the ratio of school children to the adult population are beside the present inquiry. But it is perfectly obvious that this is an educational factor of much value.

Little logical acumen is required to see either the educational value or the social congruence of such factors as the wealth per capita of the country or of any state in it,

¹ Report of the Commissioner of Education, 1890-91, p. 24.

the expenditure per capita for public education, the expenditure for the same purpose per pupil in the schools, and the per cent. of illiteracy, taking the population ten years old and more into the account. These items are shown in the following table:

North Atlantic States, - - - -	\$1,132	\$2.06	\$23.65	6.2
South Atlantic States, - - - -	579	.96	8.25	40.1
North Central States, - - - -	1,129	2.81	19.96	6.7
South Central States, - - - -	583	.98	7.59	39.5
Western States, - - - -	2,250	3.55	34.03	11.6

It must be remembered, however, that these statistics are, in part, now several years old.

Perhaps I should observe that statistics may be taken too seriously. We need not now examine the arguments by which Mr. Buckle and others like him have sought to show that man has no free agency, but that society is governed in all its movements by laws as fixed as those of material nature. It answers the present purpose to say that the highest state of education is not always found in the most populous, the richest, or the most homogeneous states. France is much richer than Germany, but she is inferior in education. England is far richer than Scotland, and has been behind her in schools of popular education since the time of John Knox. Relatively, Rhode Island is the richest and most populous of the American states, but she has never led the American common-school column. There are other factors than those that are distinctly social which enter into the problem. Educational traditions and ideas, public spirit, and force of character all tell. At the same time it would be the sheerest folly to exclude or belittle the material factors that enter into public education and all similar social interests.

APPENDIX B.

PERMANENT SCHOOL FUNDS.

I. CONNECTICUT.

It began to be noticed as early as 1824 that the Connecticut common-school fund was not working altogether as it had been expected to work. (See James G. Carter's "Letters to the Honorable William Prescott, LL.D., on the Free Schools of New England, with Remarks upon the Principles of Instruction," Boston, 1824.) Connecticut, however, made the fatal mistake of distributing the income of the fund to the towns and districts without requiring them to raise by taxation an equal amount, or, indeed, any certain amount, for the support of their schools. In 1853 Connecticut was expending on her schools only one-third as much per pupil as the neighboring states were expending, while she was raising by taxation only one-tenth or one-twentieth part as much as they were raising per pupil. Dr. Henry Barnard says: "Taxation for school purposes had not only ceased to be a cheerful habit of the people, but was regarded as something foreign and anti-democratic. The supervision of the schools had become in most societies a mere formality, and the whole system seemed struck with paralysis." And yet the governor of the state had sounded the alarm as early as 1826, while prominent citizens had counseled other states not to repeat the mistake that Connecticut had made. (See a valuable article on the Connecticut School Report, subhead, "The School Fund and Its Effects," in *The American Journal of Education and School Review*, edited by Absalom Peters and Henry Barnard, Vol. I. (1856), pp. 590-9.)

II. TEXAS.

Mr. C. Lombardi, member of the school board of Houston, Tex., contributed to *The Business Record* of that city, November, 1896, the following article, entitled "Our School Fund":

"First of all comes the question of revenues. While we have been boasting of our princely educational fund, consisting of millions of acres of land, we have forgotten to inquire into the location, character, and value of this land. It was long taken for granted that any kind of wild land would increase in value as time passes. It was argued that as the amount of land in any country is a fixed quantity, and as population tends to increase steadily, land could not but increase in value as population increases. But a rude shock awaited these plausible theories when suddenly land values began to decline, not only here, but everywhere, in other states as well as in Texas, in Europe as well as in America, along with the depreciation of agricultural products. Many circumstances led to this result, chief of which is the long interval of peace among civilized nations, thus liberating and increasing an immense productive force, formerly largely devoted to the destruction of both life and the means of life; the facilities and cheapness of transportation, and the opening up of immense tracts of land in other portions of the world, made accessible to cheap labor. It was found that the most abundant commodity in the universe is raw, untilled land.

"Then as to the character of the land set aside for our school fund. Time was when any kind of land was supposed to have some value, if only for pasturage or mining purposes. Here again a revolution has taken place, making wild grazing lands almost valueless, and mining lands in this state quite so. The demand for range cattle has been transferred to the domestic-fed cattle raised on small farms, and our great cattle industry of the past has practically passed away.

"As for mining lands containing iron, copper, and coal, the great abundance of all these found nearer to market and closer to lines of transportation, together with the greater facilities for working old mines afforded by modern invention, and the agitation for a lower tariff policy throughout the South, has put a quietus to any thought of developments or investments in Texas for some time to come.

"Hence, while our school fund derived from the sale and lease of land has not increased in value, the scholastic population has largely increased, and the financial demands for public education are increasing every day. They are increasing, not only by reason of the natural increase of the scholastic population, but also by reason of the very progress achieved in educational methods and the higher ideal attained. Not only has this higher ideal induced more people to send children to school, but it is demanding a higher standard of ability and character in the teachers, and this costs more money.

"What is the remedy? Obviously special taxation as a supplement to our revenue from the school fund. Either that or a curtailing of our school facilities, and this last is not to be thought of. But here again we labor under a singular disadvantage from the fact that we have a school fund, that we have exaggerated its importance and value, and indulged in extravagant boasts about it. Our people have become too much accustomed to rely on this great school fund, and will be unwilling to entertain the idea of raising a school revenue by taxation. Had we never had a school fund, or never talked about it, our people would probably not hesitate to tax themselves heavily for the benefit of the schools, as do the people of Colorado, for example. But it will be difficult to reconcile the glory of our great school fund, which has been dinned into the taxpayer's ears, with the necessity of going deep into his pockets to supply the educational deficit.

"It is just as well that we should begin to consider this matter and bring it before the people. It is bound to become an issue sooner or later, and the sooner the better. We must not wait until we are confronted with a deficit so great as to paralyze our schools and destroy their efficiency. Other things demand the attention of the friends of popular education, but this is fundamental."

RECEIPTS OF SCHOOL MONIES.
[From the Report of the Commissioner of Education, 1894-95.]

State or Territory	From permanent funds (income and rents)	From taxation			From all other sources	Total revenue (excluding balance on hand and proceeds of bond sales)
		From state taxes	From local taxes	Total from taxation		
1	2	3	4	5	6	7
United States	\$8,336,612	\$33,252,941	\$119,019,984	\$152,272,925	\$16,988,154	\$177,597,691
North Atlantic Division.....	620,882	12,532,368	44,143,714	56,676,082	7,413,662	64,710,626
South Atlantic Division.....	441,619	4,032,340	5,435,338	9,467,678	680,486	10,589,783
South Central Division.....	1,944,798	6,332,407	4,153,512	10,485,919	666,703	13,097,420
North Central Division.....	4,589,521	7,618,618	58,006,497	65,625,115	7,099,015	77,313,651
Western Division.....	739,792	2,737,208	7,280,923	10,018,131	1,128,288	11,886,211
North Atlantic Division:						
Maine.....	a 46,040	516,608	1,265,090	1,781,788	0	1,827,828
New Hampshire (1893-94).....	14,753	86,817	729,176	815,993	60,963	891,709
Vermont.....	48,622	93,556	680,580	774,136	68,225	890,983
Massachusetts.....	b 175,944	0	10,469,368	10,469,368	16,044	10,661,356
Rhode Island.....	9,105	118,834	1,116,3720	1,282,554	55,102	1,340,821
Connecticut.....	168,870	255,883	1,859,316	2,106,199	183,205	2,458,274
New York.....	30,312	3,856,804	13,865,890	17,722,604	3,473,141	21,226,147
New Jersey.....	127,236	2,119,400	2,261,513	4,380,973	101,505	4,609,774
Pennsylvania.....	0	5,484,316	11,858,061	17,342,377	3,455,357	20,797,734
South Atlantic Division:						
Delaware (1889-90) a.....	60,000	c 6,000	209,000	215,000	0	275,000
Maryland.....	55,323	583,974	1,454,051	2,038,025	142,255	2,235,603
District of Columbia.....	0	0	953,155	953,155	0	953,155
Virginia.....	43,804	930,548	805,025	1,735,573	44,911	1,824,288
West Virginia.....	35,134	318,506	1,089,197	1,407,703	196,646	1,639,483
North Carolina (1893-94).....	0	646,543	13,323	659,866	117,213	777,079
South Carolina.....	0	437,143	75,918	513,061	35,020	548,081
Georgia (1893-94).....	212,052	1,008,752	389,702	1,398,454	64,019	1,674,525
Florida (1893-94).....	35,366	100,874	445,967	546,841	80,422	662,569

(See notes on p. 504.)

RECEIPTS OF SCHOOL MONIES—Continued.

	1	2	3	4	5	6	7
South Central Division:							
Kentucky	144,817	1,707,438	1,537,854		3,245,292		3,390,109
Tennessee (1893-94)	143,602	1,252,233	(d)		1,252,333	0	1,588,277
Alabama (1893-94)	115,887	513,674	e 141,861		655,535	102,442	780,953
Mississippi	77,946	923,500	176,256		1,090,756	44,706	1,222,408
Louisiana	48,385	213,550	582,077		795,627	232,964	1,076,976
Texas (1893-94)	1,379,361	1,269,679	764,464		2,034,143	181,906	3,595,411
Arkansas	34,800	396,308	800,000		1,250,308	0	1,291,108
Oklahoma (1893-94)	0	a 56,025	e 91,000		147,025	5,153	152,178
North Central Division:							
Ohio	251,569	1,740,228	9,682,324		11,422,552	751,205	12,425,326
Indiana (1893-94)	583,331	1,915,240	3,623,096		5,538,336	1,797,253	7,918,920
Illinois	638,995	1,000,000	13,649,780		14,649,780	623,979	15,912,664
Michigan (1893-94)	a 312,000	a 702,384	4,331,515		5,033,899	847,089	6,192,979
Wisconsin (1893-94)	a 190,000	a 584,145	3,510,066		4,004,201	450,612	4,734,813
Minnesota	418,172	733,543	2,894,850		3,628,393	578,551	4,625,116
Iowa	235,663	0	7,286,107		7,286,107	942,978	8,458,748
Missouri	838,339	685,174	4,735,498		5,420,672	66,364	6,325,375
North Dakota (1893-94)	154,126	152,867	630,431		783,298	53,715	991,139
South Dakota (1893-94)	146,220	0	1,006,968		1,006,968	186,669	1,339,856
Nebraska	367,029	105,037	2,303,970		2,409,007	681,033	3,457,069
Kansas	454,167	0	4,357,902		4,357,902	119,576	4,931,645
Western Division:							
Montana	0	0	524,789		524,789	36,616	561,495
Wyoming	0	0	181,766		181,766	4,727	186,493
Colorado (1891-92)	108,463	0	1,462,109		1,462,109	753,182	2,323,754
New Mexico	0	0	119,673		119,673	46,126	165,799
Arizona (1893-94)	a 5,770	a 156,400	a 43,400		a 190,800	a 41	205,611
Utah	0	276,195	504,304		786,499	62,096	842,595
Nevada (1893-94)	98,002	11,941	95,711		95,711	1,080	194,793
Idaho (1893-94)	14,331	0	303,641		303,641	2,794	320,766
Washington	90,278	0	924,715		924,715	14,293	1,029,286
Oregon (1893-94)	162,948	0	744,397		744,397	140,404	1,047,749
California (1893-94)	a 260,000	2,292,672	2,388,359		4,681,031	66,929	5,007,960

a Approximately.

b Includes tax on dogs, etc.

c State appropriation for colored schools.

d Not reported; a part is included in "other sources."
e Report incomplete.

APPENDIX C.

THE CALIFORNIA SYSTEM OF SCHOOL MAINTENANCE.

Every portion of this state is embraced in the 3,243 school districts into which California is at present (1896) divided. Under our law every city and incorporated town constitutes a separate school district, unless subdivided by the legislative authority thereof. Only two cities of the state are subdivided into separate school districts.

SOURCES OF REVENUE.

STATE —

(1) *Permanent Fund*.—The permanent school fund of the state consists of the receipts from the sales of school lands (Sections 16 and 36 of each township), and now amounts to \$4,000,000. The interest on this fund, together with the interest on school land, yields an annual income amounting to \$260,000, or more.

(2) *Poll Tax*.—There is a state school poll tax of \$2 levied on each male inhabitant, between the ages of twenty-one and sixty years. From this source the state school fund receives nearly \$370,000 annually.

(3) *Collateral Inheritance Tax*.—There is a tax of 5 per cent. on collateral inheritances, which is paid into the school fund of the state. The amount received from this source, of course, varies from year to year.

(4) *State School Tax*.—The statutes require that there be levied on all property in the state an ad-valorem tax sufficient to raise the sum of \$7 yearly for each census child. On account of the allowance made in levying the tax for possible delinquencies, the actual sum realized is somewhat in excess of \$7 per child.

The revenue derived from these four sources for the fiscal year ending June 30, 1896,

was:

(1) From Permanent School Fund,	-	-	-	-	\$264,429.00
(2) From State Poll Tax,	-	-	-	-	362,794.12
(3) From Collateral Inheritance Tax, etc.,	-	-	-	-	102,688.45
(4) From State School Tax (ad valorem),	-	-	-	-	2,320,270.08

Total State Moneys,

\$3,050,181.65

The school census for the year was 323,130. The average, therefore, per census child from all state sources was \$9.43.

COUNTY —

Each county is required by law to levy a county school tax, the maximum rate of which shall not exceed 50 cents on each \$100 of taxable property, nor the minimum rate be less than sufficient to raise \$6 for each census child in the county.

DISTRICT —

The charters of cities having boards of education provide for the levying of school taxes within the corporate limits, in addition to the state and county school taxes.

School districts governed by boards of school trustees may, by vote of the people, levy additional taxes for school purposes, the maximum rate being fixed at 30 cents on each \$100 of taxable property. They may also, in any year, levy a tax of 70 cents per \$100 for building purposes.

BONDS —

Any school district in the state may, by a two-thirds vote, bond itself for the purchase lots, erection of buildings, etc.

The constitution and law of the state require that all property shall be assessed at

its "full cash value." The word "property," as defined in the constitution, includes "moneys, credits, bonds, stocks, dues, franchises, and all other matters and things real, personal, and mixed, capable of private ownership."

DISTRIBUTION OF SCHOOL FUNDS.

For the purpose of fixing a primary base for the distribution of school funds, there is taken, during the month of April, each year, a census of all the children in the state between the ages of five and seventeen years. The term "census children" must not be confounded with the term "children of school age," as the latter embraces all children between the ages of six and twenty-one years.

The method of distribution is unique, combining, as it does, the enumeration and average daily attendance methods. Its strong point is the marked recognition it gives to the principle that the state, as a whole, is interested in the education of all its citizens. To that end the rich and populous centers are made to contribute to the poor and sparsely settled districts. At the same time the local and county taxes imposed are a constant reminder that each locality must share with the state the responsibility of educating its youth.

All state school moneys are apportioned by the superintendent of public instruction to the several counties in proportion to the number of school-census children, as shown by the returns of the school-census marshals of the preceding school year, and the moneys so apportioned are distributed to the several county treasurers by the state treasurer, on the order of the state superintendent.

The county school funds are collected by the county tax collector, and turned over by him through the county auditor to the county treasurer, who is the custodian of all school funds. It is the duty of each county auditor to notify the county superintendent of schools of all school moneys received — both state and county. The entire revenue is distributed by the county superintendent of schools to the various school districts (including cities) on the basis of the number of teachers to which each district is entitled. This number is determined by calculating one teacher for every seventy census children, or fraction thereof of not less than twenty census children, in the district. He then apportions to each district \$500 for every teacher assigned to it. Should a district have less than twenty and more than nine census children, he must apportion to it only \$400. Districts having less than ten census children lapse, unless supported by voluntary contribution. Such districts usually lapse, their territory being absorbed by adjoining districts. This provision of the law is not intended to govern the number of teachers actually employed by a district; it simply furnishes a basis for determining the amount of money to which a school district is annually entitled from the public funds.

All school money remaining on hand after distributing \$500 (or \$400, as the case may be) per teacher is apportioned to the several districts in proportion to the average daily attendance in each district during the preceding school year. The amount varies in the different counties, ranging from \$2 or \$3 per child in average daily attendance in a few sparsely settled counties to \$10 or \$12 in the more densely populated. The average for the entire state is not far from \$8 for every child in average daily attendance.

In distributing the school money the county superintendent considers each city in the county, no matter how large, simply as a school district, which it is under the law; and for this purpose each city superintendent must report school statistics to the county superintendent, just as does the teacher in the most insignificant district in the county.

As an illustration of the method of distribution, suppose district "A" has a census roll of 1,000 children, and an average daily attendance of 600 for the preceding school year. The county superintendent discovers from the school statistics in his office, after apportioning \$500 for each teacher in the county, that the amount per child in average daily attendance is \$8. Dividing 1,000 by 70, we find that "A" is a "fifteen-teacher district." Five

hundred dollars multiplied by 15, plus \$8 multiplied by 600, equals \$12,300, the amount that "A" receives in a year from the state and county school funds.

As before remarked, the treasurer of each county is the custodian of all school funds; all orders on said funds drawn by the local district or city authorities must pass through the hands of, and be approved by, the county superintendent before they can be paid by the treasurer.

It might be urged that such a system, while it guards the educational rights of children in the poorer districts, may overstimulate a desire for the creation of new school districts. It has that tendency, but the state has thrown some safeguards around it (although perhaps not yet sufficient) by imposing certain restrictions upon the creation of new districts in the way of distance from the nearest schoolhouse and the minimum number of census children required. Under the law the schools of the state are enabled to maintain an average of eight and seven-tenths months per year.

SAMUEL T. BLACK.

Sacramento, Cal.

APPENDIX D.

THE COUNTY AS THE UNIT OF SCHOOL ORGANIZATION.

The following paragraphs are from an article by Mr. Lawton B. Evans, Superintendent of Schools for Richmond county, Ga. (See the *Educational Review*, April, 1896.)

"I believe very firmly that the county or township is the proper unit of educational organization. If one system of schools can be made to extend over a whole county, including the city and villages, the organization will be upon a basis of territory. By this means the entire country can after awhile be brought under a uniform organization. So long as the organization is by cities we merely organize by locality, which can never be uniform or entire. It will always remain a one-sided development. A proper policy is to induce the people hereafter to organize by area rather than by spots. The effect of this will be to give to the rural child the same school advantages as to the city child, and there is every reason in equity and good sense why these advantages should be the same.

"I come from an illustration of this kind of organization, and it may not be amiss to tell something of the schools of Richmond county, Ga., in which county is situated the thriving city of Augusta. Here for the past twenty-five years has been in operation what is known as the county system.

"One board of education, composed of representatives elected by the people for a term of three years, one-third of the membership expiring every year, has charge of the entire school interests of the city of Augusta and of the county of Richmond. This board of education has the unique power of levying a school tax directly upon the people of the county, without revision by any other authority and without any limit as to rate or amount. The school tax is levied and collected as a uniform rate upon all property of the county, whether it is in the city or out of it. This forms the general school fund of the county, supplemented by the state appropriation.

"When it comes to the distribution of this fund, no regard is paid to the amount raised by any ward of the city or any district of the county, but the fund is distributed according to the necessities of each ward and district, determined by the number of children to be educated. The school fund of the whole county is raised by a tax on all the property of the county, and is distributed upon the basis of the school population of each community. Thus it happens that a community rich in naught else but children will get a flourishing school paid for by its wealthier but less fortunate neighbors.

"As a matter of fact, a large part of the money paid by the city is annually spent in

the rural districts, for the city has nine-tenths of the taxable property, but only three-fourths of the school population. So it happens that the rural schools pay one-tenth of the school tax and receive the benefit of one-fourth of it. Augusta has spent in the past twenty years the sum of \$200,000 in building schoolhouses and paying school-teachers for the children who live in the country districts around her. Augusta has shown her faith in the proposition that every city needs to be environed by an intelligent, industrious, and contented population.

"When it comes to the teachers, the same qualifications are demanded for rural schools as for city schools. Upon the regular examination terms, and upon issuing of licenses to teach, an applicant does not know whether he will teach in the city or out of it, and to many it is a matter of indifference. And I know whereof I speak when I say that there are young women graduates of normal colleges doing high-grade work in country schools ten miles beyond the limits of the city, and doing it happily and cheerfully. We believe firmly in the further proposition that a country school is entitled to as good a teacher as a city school, and that those who live in the fields are as deserving of education as those who dwell beside the asphalt. Carlyle must have had a country child in his mind when he said: 'This I consider a great tragedy: that one soul should remain in ignorance that had capacity for higher things.'

"The teachers are treated as nearly alike as can be. City and country teachers are paid about the same salary. They get it at the end of every month and on the same day. The certainty and the regularity of a fixed compensation create a sense of security, safety, and comfort for a teacher, and accordingly increase his efficiency. No teacher can do his best work when he works at starvation rates, is paid once every three or four months, and often in scrip that he must discount. There is much philosophy and also economy in the maxim that advises us to pay a public servant well and watch him closely. So we draw no distinction of locality. First-class work is worth as much twenty miles from town as it is in the heart of the city.

"The schools of the county all run nine calendar months. They all begin at the same time and close at the same time. During the last year every child of the county, regardless of where he lived, was offered nine months of actual tuition.

"So far as schoolhouses are concerned, these are located in rural districts so as to be on an average of four miles apart. No child is out of walking distance of a school open nine months in the year and taught by a good teacher. These houses are owned by the board of education and cost from \$300 to \$2,500 each, according to size and equipment.

"One superintendent has charge of all the teachers in the county. The same degree of efficiency that should attend the supervision of city schools is likewise extended to the country schools. An expert teacher for all is the theory, and, so far as human effort can avail, it is carried out in practice. The same course of study is prescribed for the pupils, and the same course of professional reading is required of the teachers. The teachers of the city schools meet for instruction once a week, the teachers of the country schools meet once a month, and in addition have a two-months' institute in the summer months."

APPENDIX E.

COMPARATIVE COST OF THE TOWNSHIP AND DISTRICT SYSTEMS.

The subcommittee has made diligent inquiry as to the relative cost of the township-unit and independent-district systems of carrying on common schools. Naturally, it is a difficult thing to come at, as the elements entering into the problem are so fluctuating. Some testimony is presented below from three well-known state-school executives, all given in response to the inquiries of the committee.

I. FRANK A. HILL, Secretary of the Massachusetts State Board of Education :

I do not think it will be possible without a great deal of special investigation to furnish figures or statistics to show that the town plan is either cheaper or more expensive than the district plan. The expenditures for schools in Massachusetts have been gradually increasing, because of better buildings, better sanitation, better equipment, better teachers, and better salaries. I have a strong conviction, however, that the same amount of money may be made to go much further under town management than under district in the way of securing greater efficiency in the schools.

We are consolidating our scattered and thinly attended schools quite extensively in our rural towns, and transporting the children. In this way towns frequently save a little money, while providing better accommodations and securing better teachers. But the argument we use in favor of such consolidation is not the economical one ; it is the educational one, rather, that the school efficiency is thus increased.

II. CHARLES D. HINE, Secretary of the Connecticut State Board of Education :

It is hardly right to say that the district system [in Connecticut] is an independent system. The town still remains the unit of financial management. All money from the state treasury goes to the town, is added to the town tax, and then is distributed by the town board of apportionment to the several districts. In only 138 of the 1,400 districts is a tax laid. These districts have the power to tax themselves, but you will see that they seldom exercise it. A few districts, probably not more than twenty-five, support their schools in part by district tax. The remainder of the districts mentioned have taxed themselves for occasional expenses, like insurance, repairs, or perhaps for building a schoolhouse.

As to the cost of the two systems, . . . it must always be said, and I impress that upon those to whom I speak, that the two cannot be justly compared, except by going over a period of years. When towns enter upon the town system, they are likely to increase expenses, if their previous expenses have been stingy and inadequate. On the contrary, if under the district system they have been liberal, the economy which the town system permits will enable them to reduce their expenses. It follows, then, that you would have to know the policy under the district system before you could judge whether the town system had made a difference in the case. The tendency in the large districts in this state is to become practically independent, and to support the schools liberally under the district system. There are advantages of directness, power to borrow money, etc., which make it possible to secure liberal appropriations in large districts. The tendency in small districts is to diminish the cost because there are few children.

As a result, taking the average district, the town system shows in this state very much better schools, so far as instruction is concerned, as well as more efficient administration. It would be impossible, of course, to illustrate this by numerous examples. We have not been able to secure legislation compelling all towns to accept the town system. We are, however, advancing slowly toward that result by popular vote. In the last year eleven towns voted to adopt the town system, and now, out of 168, fifty-four are under town systems. It comes slowly, but it is coming as a result of a change of heart and of an endeavor to make better schools.

III. W. W. STETSON, State Superintendent of Schools, Maine :

There is some justice in the claim that the district system is, in one sense, cheaper than the township system. Under the district system the schools were maintained for a much less number of weeks than under the town system, especially in small districts.

When we were running under the district system, patrons of the schools were willing to bid off the board for less than a dollar a week ; sometimes they boarded the teacher without expense to the district, and also furnished wood, repaired the schoolhouse, and

kept it in proper condition generally. It was possible to have longer terms, because of these contributions.

Under the township system the town pays for the teacher's wages and board, and has to provide the wood, make the repairs, furnish a janitor, and provide for keeping the house clean. Shorter terms and donations made the old district school cheap in the sense of using but a small amount of money. It was also cheap in another sense. It was usually taught by some indigent relative of the agent. But in Maine we are not entirely free from this curse, even under the township system. We have discovered that 872 of the 4,600 teachers of Maine are related to or connected with the members of the superintending school committees in such a way as to have an unsafe influence in securing their appointments. There can be no question but that for an equal length of terms, if all the services rendered and materials furnished are paid for, the township system is much more economical than the district system. It is also true that when the conditions prevail that are indicated above, in the matter of money, the district system may be cheaper.

APPENDIX F.

TRANSPORTATION OF PUPILS.

The declining population of many towns and counties, and even larger districts, affects the rural schools very unfavorably. (See *Appendix A.*)

I. Hon. C. R. Skinner, State Superintendent of Public Instruction of the State of New York, thus forcibly urges the need of consolidation in the schools of that state:

"In 1860 the school population of the state outside of its cities was 894,432. At the close of the school year of 1895 the school population of the state outside of its cities and villages containing upwards of 10,000 people was 609,146, a decrease of 285,286, or upwards of 31 per cent., while the number of school districts in 1860 was 11,358. While the number of school children has decreased during that time nearly one-third, there has been substantially no decrease in the number of rural districts. It needs no argument to show that the antiquated school-district system, which served the people so well in 1860, has outgrown its usefulness, and that, if the state of New York desires to keep pace with adjoining states in the advancement of her educational interests, some new system must be devised.

"The township system, or some unit larger than the present system, in my judgment, is the only solution of the difficulty, and until the state shall have adopted that system its rural schools will continue to decline in efficiency. There is, in my opinion, no better school in America than the union free school and village school of our state, but the results there obtained cannot possibly be achieved in the weak rural districts, where the average attendance is less than twenty pupils, and, as shown above, in nearly 3,000 districts less than ten. The ambitions and rivalries of the students—incentives to greater exertion on the part of the pupils—which prevailed thirty-five years ago in these country districts no longer exist. The school is lifeless, cannot be graded, there is little enthusiasm among the students, and that activity and earnestness which come from numbers are entirely lacking." (Report for 1894-95, pp. x, xi.)

II. The arguments for the reform have been luminously stated by Mr. A. W. Edson, one of the Massachusetts state agents, as follows (Fifty-eighth Annual Report of the Massachusetts Board of Education, 1893-94, pp. 215-17):

Consolidation and Transportation.—There is a decided tendency on the part of intelligent and progressive communities to close the small schools in remote districts and to transport children to the graded schools of the villages, where better classification, better

grading, and better teaching are the rule. This is done not so much from an economic standpoint as because of the firm conviction that the children receive greater educational advantages there than in the small, ungraded schools.

The number of children in the back districts is small, and growing less every year. With few children and small classes there can be but little enthusiasm and progress.

The leading arguments in favor of the movement are :

1. It permits a better grading of the schools and classification of pupils. Consolidation allows pupils to be placed where they can work to the best advantage ; the various subjects of study to be wisely selected and correlated, and more time to be given to recitation.

2. It affords an opportunity for thorough work in special branches, such as drawing, music, and nature study. It also allows an enrichment in other lines.

3. It opens the doors to more weeks of schooling and to schools of a higher grade. The people in villages almost invariably lengthen the school year and support a high school for advanced pupils.

4. It insures the employment and retention of better teachers. Teachers in small, ungraded schools are usually of limited education, training, or experience, or are past the age of competition. The salaries paid in cities and villages allow a wide range in the selection of teachers.

5. It makes the work of the specialist and supervisor far more effective. Their plans and efforts can all be concentrated into something tangible.

6. It adds the stimulating influences of large classes, with the resulting enthusiasm and generous rivalry. The discipline and training obtained are invaluable.

7. It affords the broader companionship and culture that come from association.

8. It results in a better attendance of pupils, as proved by experience in towns where the plan has been thoroughly tried.

9. It leads to better school buildings, better equipment, a larger supply of books, charts, maps, and apparatus. All these naturally follow a concentration of people, wealth, and effort, and aid in making good schools. The large expenditure implied in these better appointments is wise economy, for the cost per pupil is really much less than the cost in small and widely separated schools.

10. And, again, it quickens public interest in the schools. Pride in the quality of the work done secures a greater sympathy and better fellowship throughout the town.

Mr. Edson reports that the following objections have been made in Massachusetts :

1. Depreciation of property ; decreased valuation of farms in districts where schools are closed.

2. Dislike to send young children to school far from home, away from the oversight of parents ; and to provide a cold lunch for them rather than a warm dinner.

3. Danger to health and morals ; children obliged to travel too far in cold and stormy weather ; obliged to walk a portion of the way to meet the team, and then to ride to school in damp clothing and with wet feet ; unsuitable conveyance and uncertain driver ; association with so many children of all classes and conditions ; lack of proper oversight during the noon hour.

4. Insufficient and unsuitable clothing ; expense to parents of properly clothing their children.

5. Difficulty of securing a proper conveyance on reasonable terms, or, if the parent is allowed compensation, of agreeing upon terms satisfactory to both parties, parents and town officials.

6. Local jealousy ; an acknowledgment that some other section of the town has greater advantages and is outstripping any other locality.

7. Natural proneness of some people to object to the removal of any ancient land-

mark or to any innovation, however worthy the measure or however well received elsewhere.

To these objections Mr. Edson, who is one of the most competent of authorities, replies:

The first one is more imaginary than real, for any level-headed man with children to be educated will place a higher value on the quality of the schools and the school spirit in the community than upon the number and accessibility of the schools. Experience has demonstrated the fact that property in towns committed to this plan has appreciated rather than depreciated in value.

The second and third objections are the most serious. It behooves school authorities to see that the danger is reduced to a minimum. Suitable conveyances, covered, should be provided, and competent, careful drivers selected. No risks should be taken. During the noon hour some teacher should remain with the children who carry luncheon.

The fourth, fifth, and sixth objections have no great weight. The last one has great influence with those people who choose to live, move, and die as did their ancestors, on the theory that this is the last generation, and that any special efforts at improvement are just so much more than is wise or necessary.

III. The experiment in consolidation now in progress in northeastern Ohio is of such interest and promise as to warrant extracts from the annual reports for 1895-96 of the two superintendents who have been most prominent in the work. This recent movement may have an interest for some minds that earlier movements would not possess.

I. Extracts from the report of Mr. F. E. Morrison, Superintendent of Kingsville, Ashtabula county:

The new school system, which is known as the Kingsville system of education, has been formulated and introduced with marked success.

By this system the pupils of the subdistricts are given the same advantages for obtaining an education as the village pupils, and this result has been obtained without working any disadvantage to the village pupils, for we have been enabled to open a new room and supply another teacher in the village schools, thus reducing the number of grades in each room and giving all the pupils better school advantages. We have sufficient room yet for several more pupils without crowding the rooms.

The pupils of the subdistricts have not only been given the advantage of more extended associations and larger classes with which to recite, but they have also the advantages of a school where the teacher has fewer recitations and can give more time and attention to each recitation; thus the pupil's progress is much more rapid than is possible in a school where there are three times as many classes and one-sixth the number of pupils. It is a fact that the work of the teacher depends more upon the number of classes to recite than the number of pupils in attendance. It is a pleasure indeed to note that the attendance in the subdistricts that have availed themselves of the new system has increased from 50 to 150 per cent. in some cases, and a larger increase in all cases; the daily attendance in the same subdistricts has increased from 50 or 60 per cent. to 90 or 95 per cent., thus increasing greatly the returns from the school fund invested. This has been accomplished at a saving of more than one thousand dollars to the taxpayers in the three years.

The board of education and citizens of Kingsville are to be congratulated for their progressive and energetic spirit in being pioneers in formulating and placing in operation a system of education superior to any in the state of Ohio, and which is to be the system of the future. The board of education has been enabled, under the new school law, to conduct its financial matters by better business methods, buying its supplies in quantities and letting its contracts on competitive bids, and by centralizing the schools, thus saving many needless expenses.

Since the schools were centralized the incidental expenses have decreased from \$800 to \$1,100 per year, to from \$400 to \$600 per year. All other expenses have also decreased, which may be seen from the following table compiled from the clerk's records :

EXPENDITURES OF THE BOARD OF EDUCATION OF KINGSVILLE, O.

1889-90,	-	-	-	-	-	\$3,248.05
1890-91,	-	-	-	-	-	3,716.23
1891-92,	-	-	-	-	-	3,183.54
Total for three years, -						\$10,147.82
1892-93,	-	-	-	-	-	\$3,153.44
1893-94,	-	-	-	-	-	3,072.73
1894-95,	-	-	-	-	-	2,831.20
Total for three years, -						\$9,057.37

In giving these figures we have deducted the \$600 with interest which was borrowed in 1889, and has been paid during the past three years.

It should be mentioned also that the permanent improvements made by the board of education during the past three years are nearly double the amount made during the preceding three years.

2. Extracts from the report of Mr. J. R. Adams, Superintendent of Madison township, Lake county :

In my report to the board one year ago I called attention to the very low average attendance in some of our schools, the great expense per capita of educating the pupils in those small schools, and to the fact that, on account of the lack of interest and enthusiasm therein, good results could not be obtained, and suggested the plan of consolidation as the proper solution to the difficulties.

Acting upon my suggestion, the board, having in view only the best interest of the children for whom our schools exist, voted to consolidate three subdistricts at North Madison, No. 16 and No. 3 with No. 12, and also three at Unionville, No. 10 and No. 11 with No. 4, arrangements being made with the school board of Harpersfield township whereby the pupils of Subdistrict No. 1, of said township, might attend the school at Unionville upon payment by the board of education of Harpersfield to the board of education of Madison township the sum of \$140 tuition.

Our school opened with two teachers and with an attendance of ninety-three pupils. This was certainly more than the number for which we had planned, and was a great surprise to me, for from No. 10, in which subdistrict there had been the previous year an attendance of only ten pupils, there came eighteen; from No. 11, in which there had been an attendance of only eight pupils, there came eighteen, and from the Harpersfield district, in which there had been an attendance of fourteen pupils, there came twenty-three. The number of pupils enrolled in this school was 107, with an average attendance of seventy-three.

Having tried the new plan for a year, it is no longer an experiment, but an experience with us; therefore, let us now candidly look at the results. First, I wish you to know what the patrons of the consolidated school think of the plan, and then to give you, as briefly as I can, some of my own observations. All the patrons in the school of Subdistrict No. 10 of Madison, and in Subdistrict No. 1 of Harpersfield, have signed a paper stating that they are well pleased with the plan and its results, and asking their respective boards to continue the plan another year. While there has been no canvass at Unionville, Subdistrict No. 4, to ascertain what the people there think of the plan, yet, from what I have heard, I am confident that they are unanimous in its support. The foregoing represents the opinion of patrons who send eighty-nine of the 107 pupils to this school. A large majority of the patrons in Subdistrict No. 11, who send eighteen

of the 107 pupils to the school in question, have publicly expressed themselves as being dissatisfied with the plan, and that under it their children have not received the educational advantages which they ought to have received. Further comment is unnecessary.

Following are some of the good results which have come under my personal observation:

1. A much larger per cent. of enumerated pupils enrolled.
2. No tardiness among the transported pupils.
3. Irregular attendance reduced, the per cent. of attendance of transported pupils from two subdistricts being each 94 per cent., the highest in the township.
4. Pupils can be better classified and graded.
5. No wet feet or clothing, nor colds resulting therefrom.
6. No quarreling, improper language, or improper conduct on the way to and from school.
7. Pupils under the care of responsible persons from the time they leave home in the morning until they return at night.
8. Pupils can have the advantage of better schoolrooms, better heated, better ventilated, and better supplied with apparatus, etc.
9. Pupils have the advantage of that interest, enthusiasm, and confidence which large classes always bring.
10. Better teachers can be employed, hence better schools.
11. The plan insures more thorough and complete supervision.
12. It is more economical. Under the new plan the cost of tuition per pupil on the basis of total enrollment has been reduced from \$16 to \$10.48; on the basis of average daily attendance, from \$26.66 to \$16.07. This statement is for the pupils in said Subdistricts Nos. 10 and 11.
13. A trial of this plan of consolidating our schools has satisfied me that it is a step in the direction toward whatever advantages a well-graded and well-classified school of three or four teachers has over a school of one teacher with five to eight grades, and with about as much time for each recitation as is needed to properly assign the next lesson.

I am now more thoroughly convinced than ever before that consolidation, or centralization, as it is sometimes called, is the true solution to the country-school problem.

In a private letter, of recent date, Mr. Adams says, since his report was made, consolidated schools have been established at two other points in Madison, at one place four schools, at the other three, each with two teachers. This makes five in the township (which is a very large one, owing to the "gore" on the lake). Five teams are employed to transport pupils, at a cost of about \$1 a day for a team. Every conveyance carries about eighteen pupils. There is no trouble in transporting the pupils, even the youngest, three and a half miles, which is the greatest distance. In 1895 there were eighteen schools in Madison, with an average attendance of 217; in 1896 the number was fourteen, with an average of 260; this year there are ten schools, with an average that will reach over 300. The total expense will be about the same in this township as under the old plan, but the cost per pupil will be much less. Mr. Adams adds that the new plan is rapidly growing in the neighborhood, and the belief is spreading that the new system is sure to prevail generally in northeastern Ohio.

3. The following advertisement well illustrates the care that is taken in Madison township to secure suitable transportation for school children:

NOTICE TO BIDDERS

FOR TRANSPORTATION OF PUPILS OF THE TOWNSHIP SCHOOLS.

Bids for the transportation of pupils of the Madison township schools over the following routes will be received at the office of the township clerk until Friday, July 24, at 12 M.:

Route A. Beginning at County line on the North Ridge road and running west on said road to schoolhouse in Dist. No. 12.

Route B. Beginning at Perry line on the North Ridge road and running east to schoolhouse in Dist. No. 12.

Route C. Beginning on Middle Ridge road at residence of N. Badger, running thence west on said road to the residence of Rev. J. Sandford, thence north to schoolhouse in Dist. No. 12.

Route D. Beginning at Perry line on River road, and running thence east on said road to schoolhouse in Dist. No. 6.

Route E. Beginning at the Hartman farm, thence by Bennett road to Chapel road, thence east to A. R. Monroe's, thence west on Chapel road to schoolhouse in Dist. No. 13.

Route F. Beginning at residence of J. H. Clark and running east on Chapel road to schoolhouse in Dist. No. 13.

All whose bids are accepted will be required to sign a contract by which they agree :

1. To furnish a suitable vehicle with sufficient seating capacity to convey all the pupils properly belonging to their route, and acceptable to the committee on transportation.

2. To furnish all necessary robes, blankets, etc., to keep the children comfortable; and in severe weather the conveyance must be properly heated by oil stoves or soap stones.

3. To provide a good and reliable team of horses, and a driver who is trustworthy, and who shall have control of all the pupils while under his charge, and shall be responsible for their conduct. Said driver and team to be acceptable to the said committee on transportation.

4. To deliver the pupils at their respective stations not earlier than 8:30 A. M. nor later than 8:50 A. M., and to leave at 4:05 P. M. (sun time).

Each contractor shall give bond for the faithful discharge of his contract in the sum of \$100, with sureties approved by the president and clerk of the board.

The committee reserves the right to reject any and all bids.

By order of the committee.

C. G. ENSIGN, *Clerk.*

4. Hon. T. J. Clapp, an active business man of Geauga county, who has also done good service in the legislature, makes a very flattering report of this work, in private letters to the chairman of the subcommittee. He says the centralization movement is spreading rapidly; many townships are using it, and all are delighted with the result. The feeling is becoming common that the old district school does not "measure up" to the demands of the time, and that centralization is the only hope of giving to all the children the educational advantages which they need to keep pace with the city and town schools. The higher educational advantages are placed within the reach of all the children. The pupils riding three and four miles to reach school come to the schoolhouse in better condition than those who walk only half a mile. Mr. Clapp remarks that in his township the old wooden schoolhouses have been abandoned, and a new brick schoolhouse has been built at the center of the town, at a cost of \$6,000, large enough to hold the single township school.

IV. The following reports the first transportation experiment in this country :

Wm. T. Harris, Commissioner of Education.

MY DEAR DR. HARRIS: I received the draft of your report for rural schools; also the pamphlet in regard to carrying pupils, etc. I thank you for them very much.

I looked up the matter of carrying pupils, and send you a copy of the report from the town of Quincy for the years 1874 and 1875, signed by J. Q. Adams, Asa Wellington, C. L. Badger, C. F. Adams, Jr., Wm. B. Duggan, and Jas. H. Slade. I have no doubt but

that this is the first movement in the direction of carrying pupils in Massachusetts. You will notice that this is one year before my superintendency in Quincy. From the report of 1875 and 1876, my first report, are the following items, page 139:

Lappan Bros., conveying children,	- - - -	\$129.00
Joseph T. French, " " " "	- - - -	392.50

FRANCIS W. PARKER.

Chicago, Ill., December 22, 1896.

EXTRACT FROM SCHOOL REPORT, QUINCY, MASS., 1874-75.

CRANE SCHOOL.

A reference to former reports of the school committee of the town will show that for many years the condition of the little school at Germantown has been steadily unsatisfactory. Isolated and small, classification was impossible, emulation unfelt, and enthusiasm absent. Ten pupils ranged from the primer to the proper studies of a high school. The most conscientious teacher soon lost hope and energy in such surroundings. For years committee after committee has striven in vain to afford a remedy. During the past summer, the teacher, who has been laboring there for a considerable period, declared her intention of resigning in despair. The committee, profoundly dissatisfied with the backwardness and lethargy of the school, was unable to assign the fault either to the teacher or to the pupils. At the same time, it became evident that the school building was unfit for occupation during another winter without extensive repairs. It was indeed shamefully dilapidated, decayed, and dirty. Competent mechanics, after careful survey, estimated the expense of necessary repairs to be at least five hundred dollars. Besides this extraordinary outlay, the regular expense in salary, care of house and fuel, incurred to maintain this school of ten scholars, was \$560 a year. And yet this large expense availed those ten scholars but little or nothing. The committee, therefore, determined to try by experiment whether or not at one and the same time in this department the outlay might be reduced and the returns increased. It ascertained that it could contract for the transportation of all the school children in that school district to the Coddington school for about \$420 yearly, and it thought it probable that when there they would be aroused and stimulated by the transfer to a large and graded school. The result has fully justified its anticipations. The whole number upon the register of the old Crane school was twelve, and of these the average number of attendance was never more than ten. Now seventeen are daily transported to the Coddington school from the same territory; and so great has been their interest that the attendance among them has been almost absolutely perfect. Meanwhile, both from the reports of teachers and from personal observation, the committee is thoroughly satisfied that they are making a progress in their studies which they never had approached at Germantown. For these reasons the committee thinks it decidedly for the interest of the town, and clearly beneficial for the pupils concerned, that the present experiment should be prolonged for at least a year more. It is persuaded that this policy will approve its wisdom to those who are now most doubtful if it can be fairly tried. The day of small, ungraded, remote, and isolated schools in a town like Quincy has passed away. Only absolute necessity can now justify it. Even if the plan we recommend was as much more costly as it is really less costly than the old one, we should not hesitate to urge its acceptance as decidedly the cheaper and better.

APPENDIX G.

ENRICHMENT OF RURAL SCHOOL COURSES.

At the Chicago meeting of the Committee on Rural Schools the undersigned were appointed a subcommittee to report, in the form of an appendix, a scheme for the enrichment and vitalization of the work of the rural schools by means of subjects drawn from rural life and surroundings. We do not deem it our province to discuss the theory of the rural-school programme, much less the broader problems of the country school. It may, however, conduce to a better appreciation of what we suggest if we frankly state at the outset the assumptions on which we have proceeded.

We take it for granted that the work of every school, rural or otherwise, should embrace subjects drawn from its environment and from the life of its pupils. We assume that it should do this —

Because children should be taught to gather culture, knowledge, and inspiration from everything with which they come in contact;

Because children should acquire the habit of bringing to bear their knowledge and their mental powers upon every subject of thought that falls within their experience;

Because the study of the environment is especially effective in discipline and inspiration, since it is tangible, vivid, and impressive, and awakens strong and clear concepts, and produces deep and lasting educational effects;

Because mental acquisitions thus associated with the environment will be constantly revived by recurrent contact with it, and will thus be refreshed and kept alive and effective;

Because the basis for a successful study of the unseen and the intangible is best laid in clear and strong impressions of things seen and realized;

Because the school work is thereby made directly serviceable to the work of life, the value of immediate and practical utility being added to the superior disciplinary and inspirational values;

Because it puts life and soul into the work;

Because it serves as a bond of sympathy between the out-of-school life and the in-school life;

Because, in time (perhaps not at once, while inherited prejudices last), it will become a bond of sympathy between the patrons of the school and the work of the school.

We assume that a rural school, to be a true *rural* school, must take tone and color from rural surroundings, and must contribute directly to the enrichment and inspiration of rural life. We believe that this will aid in giving meaning and attractiveness to life in the country.

The following suggestions are offered in the hope that they may be helpful to teachers in making use of rural surroundings to enrich the work of country schools and to give vividness to the various formal studies. Our space being severely limited, it has seemed best to develop a few topics with some little fullness and let these suggest the treatment which others may receive. Those which we have been forced to neglect are quite as important and as rich in good material as the ones more favored. All are treated too scantily. What is really needed is a series of primers or a manual carefully worked out, embracing information as well as suggestions. But perfected tools come only with a perfected trade. The pioneer work must be done with poor implements. The progress of the work will bring better facilities.

We shall certainly be met with the criticism that the suggested work is impracticable, that the teachers cannot carry it out. This is far too true, but not wholly true. A success

here and there will be a center of education, and from such beginnings, even though they may be small and scattered, the good work may grow. It must start somewhere and somehow, or must have many little starts in many places and in many forms. This little appendix does not hope to be anything but a passing contribution to an evolution that must be long and doubtless slow. The gravest difficulty lies in the defective education of our teachers. To remove this we would urge every normal school to give elaborate courses in the lines here suggested, and to recognize in other ways that the rural school furnishes a distinct problem that must be solved in its own way. It may be that the establishment of rural normal schools is the mode of solution. We would urge agricultural colleges to give short courses on rural science for the special benefit of country teachers, and to educate the people, through their institutes and by other means, to appreciate and to require the adaptation of the rural schools to rural needs. We would urge upon the agricultural colleges the adaptation and publication of matter on rural science and rural economy suitable for educational uses.

We begin our suggestions with the surface features, partly because a study of them is a natural foundation for that of the remaining environment, and partly because it is directly tributary to one of the leading formal studies.

I. STUDIES UPON THE SURROUNDING LANDSCAPE.

These should be found helpful (1) as a foundation for geography; (2) as a basis for imagining the aspects of other regions which must be studied through maps, descriptions, etc.; (3) as good material for oral and written descriptions, and hence as a basis for language work; (4) as a means for the culture of the sense of the beautiful, thus furnishing a rational basis for modeling, painting, and drawing; (5) as a mode of teaching the significance of things usually regarded as meaningless; (6) as an unconscious introduction to geological processes, and (7) as an aid to understanding many matters of agricultural interest.

1. *Surface Features, their Nature, Origin, and Meaning.*—Let there be a general study of the landscape of the neighborhood and a series of talks upon it for the purpose of gaining a true conception of what a landscape really is, and of laying the ground-work for comparisons with other parts of the face of the earth. The children should gain a vivid and definite idea of the nature of their own landscape as a type; if it be plain, whether it be very plain or but partially so; if undulatory, whether it be gently or strongly undulatory; if hilly, whether gently or roughly hilly; if mountainous, whether of the rounded, the rugged, or the grand type.

From the general survey of the landscape descend to its larger elements.

Note and plot¹ the hills and valleys of the neighborhood, first taking up those near and then reaching out farther and farther, so that there shall be a gradual passage from those that are familiar to those that are only occasionally or distantly seen. From these it will be a relatively easy step to those which must be wholly imagined. Thus the child is led out easily and naturally from his own environment to the general geography of the earth. In carrying this out, walks and occasionally more considerable excursions will introduce the idea of travel and of the methods by which geography is made, and, if verbal and written descriptions, sketches and maps are required, the children are started right in their geographical work by being made young geographers themselves in a limited

¹ It will be understood throughout that the work indicated should be done as largely as practicable and advisable by the children themselves, but the teacher will do well at times to lead them by example as well as instruction. The special mode of carrying out these suggestions must be left to the discretion and resources of the teacher. Our effort is only to point out certain main lines, which, of course, need not be followed closely. The teacher will often find a different way preferable for himself, and will always find much to be filled in, and perhaps more or less to be left out as not adapted to the particular school or to its surroundings.

sense. Seeing and learning thus just what geography is, experiencing for themselves just how geography is constructed, they can use their text-books intelligently and appreciatively.

From the general features descend to particulars. Note the way hills and valleys are related to each other. Are the valleys put in among the hills in any regular order or not? As early as it may seem prudent raise the question of the origin of the hills and valleys, but do not be too hasty about answering it. Let the children gradually work it out. Were the hills built up, or were the valleys cut out? Let them ponder upon this question and see if they do not find the answer to it in the hills and valleys themselves. In leading up to this question, direct the children's observation to what is actually taking place. Are the valleys being built up, or are they being cut down? What is happening in the valleys? What is happening on the roadside? Suggest to them to observe the gullies and to contrast the new gullies with the old gullies. How do the new gullies pass into the old gullies? What is the difference in form between the new and the old? Which are most like the valleys? Lead them on thus to see how a trench may be gradually widened and rounded into a valley. Lead them to observe how tributary gullies arise along the sides of the principal ones, and how they grow by widening themselves and by eating back on either side. Lead them to see that, if such creeping backwards and such rounding of the slopes were extended long enough, they would result in little valleys separated by ridges. Lead them on to note how the tributary valleys by eating back may at length cut through the top of the ridge and divide it into hills, and by deepening separate the hills more and more; and so on, step by step, until the children acquire a tangible conception of how valleys with intervening ridges, and, at length, intervening hills, are formed. From this miniature mode of forming a landscape it is an easy step to the comprehension of the way in which the larger valleys and larger hills, that make up the landscape around them, were produced. When this conception is fully acquired, a firm basis has been reached for understanding the formation of landscapes generally. And not only this, but the landscape comes to have a meaning where before it was quite meaningless, and it is the significance of the things by which we are surrounded that gives soul to intellectual life.

References:

American Geographical Series.

The Report of the Committee of Ten.

Davis on "Geography in the University," *Journal of Geology*.

The Journal of School Geography.

See *Appendix L* for list of books.

2. *The Study of Streams*.—Lead the children to observe just how streams flow, how the current plunges into one bank and then is turned about and plunges into the other bank; how it cuts back the bank where it strikes it; how it digs down into the bottom in certain places; how it heaps up material in other places, etc. As they observe, lead them to reason upon what they see and apply it to the study of maps. They will readily come to understand how the bends are made longer and why a stream meanders. They will thus be

¹ In the region of the glacial drift there is often no regular relation between the hills and valleys, but in other regions the hills are generally (not always) simply that part of the surface that has not been carried away in the wearing out of the valleys, and this idea that the valleys are worn out by the wash of the land is the one to be implanted in the children's minds, as it is the germ idea of the formation of most rolling surfaces. In some plain regions the valleys have not been worn out enough to form hills, and we have only a plain with trenches cut into it. In such cases it will be very easy to show the children how the valleys have been formed by the streams and by the land wash. In the glacial regions the hills and valleys may be quite irregular, and it may not always be easy to explain them, unless the teacher is exceptionally well informed on the subject.

led to see the meaning of the tortuous courses of streams. Induce the children also to note the work of temporary streams (*e. g.*, after showers) along the roadsides, in the valleys, and on the slopes of the fields. Have them notice the wash from the surface of the land, and thus lead on to the work of water transportation. Lead them to note that this matter lodges elsewhere, and thus approach to the work of deposit. By seeing when and how this wash lodges they will understand the modes of deposition, the formation of deltas, and the building of bars and spits in the streams, the formation of "bottoms," etc.

To approach the origin and maintenance of streams, direct the children to observe what takes place after a rain; if light or slow, that all water goes into the ground; if heavy and rapid, that some goes into the ground, but much runs away. The latter makes surface streams, but they don't last. Follow the water that goes into the ground. Direct attention to underground water as shown by wells, and connect this with the rain that soaks into the ground. Have the children bring together the depths of the wells at their different homes. Raise the question whether the wells go down as low as the nearest streams. (It will be found almost invariably that the water in the wells is higher than in the adjacent streams, except in occasional flood stages.) Then draw out the general principle that the underground water is higher than the streams, being only the rain water on its slow way through the ground to the streams, and that it is this water which works out to the surface in the low valleys and keeps up the supply of the living streams. The dry valleys lie above this underground water, and hence they are not constantly filled. Water only runs in them after showers. The wet valleys lie below the surface of the underground water, and hence it seeps out or comes forth in springs. The children will easily understand how the seeping out makes bottom lands wet and marshy.^{*} The principles here brought out will be helpful later in settling questions of water supply, drainage, etc.

3. *The Study of Soils.*—Incite the children carefully to examine the soil to see how it is made up. Have them wash some of it so as to separate the fine material from the coarse. Direct attention to the natural assorting done by water in the gullies, on the slopes, and in the valleys, and how, on the other hand, fine mud is laid down in the "bottoms" and elsewhere, and thus lead them to see how soils become coarser or finer according to conditions. In most places it will be easy to find pieces or beds of rock partly decayed, and to show that this rotted rock is much the same as soil. From this they may be led on to understand that soil is usually but decayed rock. This will be easily accomplished in regions where the rock lies but little below the soil and the latter graduates down into decaying rock, showing the stages of the process. Induce them to note how the leaves, grass, etc., decay and turn black, and thus lead them on to see that the dark part of the soil comes chiefly from the decay of vegetation. Induce the children to observe the different qualities of soils in different situations; the soils in the valleys, on the slopes, and on the hilltops, and lead them to see how the wash of the surface affects the soil; also how the vegetation affects the soil; and how the soil affects the vegetation. Teach them to notice the difference between wet soils and dry soils; the swelling and softness when wet, the shrinking and the hardness when dry; also the swelling when frozen and the softness on thawing; the effects of the ants, worms, and burrowing animals in bringing bottom soil to the top, letting in air, etc.; likewise the effects of the roots of plants in opening up little tubules, which are often left open when the roots decay, and so lead on to the idea of porosity and of the penetration of the soil by air. With the older students the fact that the air goes into the ground when the barometric pressure is great, and comes out when the barometric pressure is light, the "breathing of the soil," may be taught, and its importance urged. Teach the children to observe the difference in the dryness of culti-

^{*} Much marshy land is, however, due to the catching of the surface waters in basins that have no sufficient outlet.

vated and uncultivated soil, of hard soil and mellow soil; and so lead on to the utility of the culture in permitting air and moisture to go in, etc.

Starting again with decay of rocks, lead the children to see that some parts of the rocks do not decay readily, and hence bits are left, and that these are washed about and form grains of sand or pebbles. Let them observe these and see that some are well-rounded and some are angular, according to the amount of wear, and thus the origin and meaning of sand or pebbles will become evident. The rolling action of brooks and rivers and of lake and seashores will be manifest. With a thermometer interesting experiments on the temperature of soils when wet and dry, when hard and when mellow, when stirred and unstirred, etc., can be made.

References :

"The Soil," by F. H. King. The Macmillan Co.

"Rock-Weathering and Soils," by George Merrill. The Macmillan Co.

"The Formation of Vegetable Mold," by Charles Darwin.

See also *Appendix L*.

II. APPLICATIONS OF LANDSCAPE STUDIES.

The study of the features of the landscape may be followed by a study of their influence on human affairs, and on the distribution of plants and animals. The following are some of the lines along which this may be carried out :

1. *The Location of Homes.*—Relative merits of different situations, such as summits, slopes, valleys, etc.; of different exposures, as southerly, northerly, etc.; of different relations to woods, openings, outlooks, etc.; of relations to springs, streams, and other bodies of water; of access to highways or to the several parts of the farm, and the bearing of the surface features on such communications. Do the sites of the later dwellings differ from the earlier? Are there discernible reasons for change? What determined the selection of the material of the first generation of houses? Does the material change with successive generations, and, if so, why?

2. *The Location of Roads.*—How far are they influenced by surface features? How far by other considerations? Distinguish wise and unwise locations. What is the effect of wash, drainage, etc.? What changes of location or of method of maintenance may be recommended?

3. *The Location of Adjacent Towns and Villages.*—Study the reasons for their particular situations. What bearing had natural means of transportation, roadway crossings, river fords or bridges, special agricultural or mineral resources, mill sites and like features upon their location? Do the dates of their founding, the rates of their growth and other features of their history show wisdom or unwisdom in their location? Note the bearings of their location on the interests of the surrounding country.

4. *Development of the Region as Affected by its Environment.*—Study the nature of adjacent manufactories and the reason for their location. What class was first developed, what later, what changes have taken place? Has there been increase or decline, and what is its meaning? What is their importance and the value of their products? How do they affect the rural interests? What sources of power are used and what remain still unused? Note the favorable and unfavorable features in the physical conformation; the presence of mines, quarries, the facilities for transportation by roadways, streams, canals, railways, etc., and their bearing upon the development of the region.

5. *Social and Civil Life of the People as Affected by Surrounding Physical Features.*—Are the physical surroundings favorable to social gatherings and social life? Do the surface features lead to sparseness of dwellings, roundabout and difficult roads, or the opposite? Do they make the earning of a living easy and give time for social intercourse, for education, etc.? How do they affect the character of the people, etc.?

6. *The Distribution of Vegetation as Influenced by Surface Features.*—Sketch the timbered, prairie, marsh, and “bottom” areas. Note the effects of slopes, drainage, soils, etc., upon these. How do the physical conditions affect the roots, stems, leaves, and general forms of plants? Note the adaptation of different areas to different crops; also the adaptation of the region to different kinds of industry, *e. g.*, grazing, grain raising, etc. Note the changes in vegetation and compare the original with the present vegetation. Discuss the removal of forests. Where was timber first removed, and what timber? Where is it now reserved and why? Note the earlier and the later uses of timber supply, and the variation of prices and of uses of timber.

III. THE STUDY OF ATMOSPHERIC PHENOMENA.

In a manner analogous to the foregoing all the features of the air and sky *within the observation of the children* may be treated with interest and profit; the air itself, the winds, the clouds, rain, snow, hail, thunder, lightning, heat, cold, dew, evaporation, etc. The keynote should be observation, followed by inquiry, reading, reasoning, forecast, etc. The systematic prediction of tomorrow's weather at the close of each day will greatly stimulate acute observation of delicate features of cloud, wind, etc., and will build up that judgment of weather which is so important to the farmer.

It is urged that teachers secure from the nearest weather bureau station copies of the daily weather maps, and copies of the monthly summaries of the weather and crop conditions of the United States. A careful study of these maps and summaries, *supplementing the pupils' own daily observations*, will form a good basis for other geographic study. The data furnished by the Weather Bureau are particularly valuable for several reasons: (1) They are collected by trained observers; (2) the stations are so distributed as to fairly represent the whole country; (3) observations are uniformly and regularly made every day at all stations; (4) the various meteorological conditions are automatically recorded by instruments of precision, insuring great accuracy of detail; (5) the various data are appropriately represented daily upon one map which, thus, day by day presents a clear picture of the climatic and crop conditions of the whole country.

By these means the pupils will be much interested in working out the relative amounts of rainfall, cloudiness, and sunshine; also the average and the extremes of temperature found in the areas and belts devoted to the great crops, as wheat, corn, oats, tobacco, cotton, and sugar cane. The relative amounts of rain, cloudiness, and sunshine for the seasons may be readily determined. The incidents of the season in the localities where the pupils live frequently afford excellent opportunity for forming a picture of other localities far removed from their own. Thus a study of the character of the rain and the clouds in winter gives a basis for picturing arctic regions, and the same study in summer an equally sound basis for picturing tropical regions. For example, in June, 1892, there was a fall of nearly eleven inches of rain at Chicago; with the summer temperature, an almost tropical verdure was the result. In September and October in Chicago, in 1891, the rainfall was about two-thirds of an inch; this closely approximated the average precipitation in Arizona, and, when considered in connection with the unusually high temperature of the year, it became an easy matter for the pupils to picture desert conditions and modes of desert formation. By similar means the study is capable of almost indefinite expansion.

IV. THE STUDY OF PLANT LIFE.

In like manner, the plants of the region may be treated. The purpose here, as before is not so much to learn *about* plants as to come into *actual intellectual contact* with them by observation, interest, sympathy, and appreciation. Not only should the plants be observed in all their parts and functions, but their history, mode of propagation, preferences for soil, topographic situations, exposures, etc., should be studied. The association of plants with one another—“plant societies”—are especially interesting and profitable

for study. The cultivated as well as the native plants should be included, and the reasons for cultivating some plants and neglecting or warring against others afford large possibilities of interest. As farming is essentially plant culture, the vital relations of such studies are evident, if carried out on the right lines. The old-fashioned botany, the grinding out of the Latin names by an "analytical key," is not at all the thing here urged, but direct inquiry into the nature, life, habits, functions, associations, and services of plants.

To give a more concrete idea of what we have in mind, the following is offered as an illustration. It is not set up as a model. There are many ways of reaching like results.

1. *Growth from the Seed.*—With several seeds (beans, for example) in the hands of each pupil, invite a careful inspection of their surfaces, as a first step. Write upon the board a list of things observed, *e. g.*, (1) stem scar (hilum), (2) small dot on one side of hilum where pollen tube entered to fertilize the seed (micropyle), (3) ridge on side of hilum opposite from micropyle (radicle), (4) one end of bean has different slope from the other, (5) a light line or ridge extending longitudinally around the seed, etc. Request pupils to bring other varieties of beans, and see how many of the observed points are common to them all. As a training in the *exact* use of words in oral expression, require the pupils to describe precisely what has been observed. As a training in written language, require the pupils to write out what has been seen. This will react to *intensify* the seeing.

To introduce the quantitative element, let a pint cup, or a straight-sided bottle, or a glass be exactly half-filled with beans, and mark the surface of the beans with a string or rubber band. Now fill the vessel with water and put in a warm place for twenty-four hours. Set some pupil to watch the first stages of change, and charge him to be able to state the next day just what they were. On the next day measure the amount of change in volume. What has caused this change? If the water put in was first accurately measured or weighed (and every country school should have means of measuring and weighing), pour out what remains and measure it. Compute the difference. Compare the loss of the water with the increase of the beans. What has become of the water? By what means have the beans grown? Here are the first steps of growth.

Distribute the swollen beans among the pupils, and let them again look for the points observed in the dry bean. Have any disappeared? Have others appeared? Have any changed in character? Let the skin be removed. What features previously noted are removed with it? Do you now see an explanation of any features noted on the outside? Carefully note the two seed leaves (cotyledons), the radicle, and the now very evident first two leaves. Study the pea, pumpkin seed, and corn in the same manner.

As a next step, fit two layers of thick cloth to the inside of a round pie tin. Wet these pieces of cloth and place between them some of the seeds which have been studied, and turn the two pie tins together to prevent evaporation (which introduced a slight error in the experiment above). Place these in a warm place to germinate, noting the temperature. Encourage some pupil to repeat the experiment in a place where the temperature is between 32° and 45°, recording the temperature from time to time. Urge another to try the experiment, using cloths wrung out very dry. Compare results to find out the effects of heat and moisture. Try different seeds to see what differences of conditions they require. These are capital experiments which fix the foundation principles of moisture and temperature in plant growth.

When these tests have sufficiently advanced, urge the boys and girls to request permission to test the germinatory power of the seeds which their parents expect to plant in the spring. (This seed study is best done from February to April.) Place 100 seeds of a given kind under the conditions described, and note how many sprout in three, four, five, etc., days. All seeds should be tested before planting, and this is practical work

which, if rightly done, will be appreciated by parents as being immediately useful as well as instructive and disciplinary.

2. *Growth from Buds.*—When vegetation begins to start in the spring, make an excursion at noon or after school to gather specimens of large buds. Clip sprigs of the Balm of Gilead, cottonwood, or hickory, set them in water and study in the manner of the bean, and so reach the fundamental idea that the bud and the seed are in nature much the same. Pick off the scales one by one until the leaves are reached, inquiring what the scales are for; what the cotton; what the varnish. Count the number of true leaves, and then go a little later to the trees again and see how many leaves the shoots from similar buds then have. Are they the same in number as in the buds? Or have new ones formed? When were these buds formed? Why were they formed the year before? Let the children ponder over these questions.

Study the arrangement of buds and of leaves on the stems. Lead the children to discover the law that buds and leaves are placed as far apart on the stem as possible, and in a symmetrical order. Lead them to discover that this order places the leaves where there is the least shading, where the movements of sap up and down feed all leaves and branches quite equally, so that the stem will be equally loaded on all sides. Let them learn to distinguish fruit buds from leaf buds. Have them explore the gardens and orchards to see if there is an abundance of fruit buds. Teach them to distinguish between live and dead buds, particularly in regard to fruit trees. All this should be done with a definite educational purpose, in which the utility of the knowledge has also a clear recognition.

References:

- "Principles of Plant Culture," Professor C. S. Goff. Published by the author, Madison, Wis.
 "Flowers in Relation to Insects." The Macmillan Co.
 Gray's Botany.
 Bessey's Botany.
 See also list in *Appendix L*.

V. THE STUDY OF ANIMAL LIFE.

Along essentially the same lines the animal life may be treated. Here a new and important factor enters, conscious life, and this affords a most fruitful field for educating the sympathies and moral sentiments of the children. Nothing so contributes to a real and vital (not merely sentimental) sympathy with living things other than ourselves as a careful study of their lives and habits. The child comes to see the world as they see it, and to appreciate and sympathize with them in their efforts to work out the purposes of their lives. And even if these purposes strike across human interests, the sympathy will not be entirely absent, and cruelty will grow more and more rare as sympathetic education progresses. The education of the sympathies finds little space in the formal school programme, and hence the special value of utilizing the opportunity here afforded.

There are several other topics which may be treated in like manner, as mensuration in its application to land measurements, etc., various phases of economics as applied to rural affairs, the social and civic aspect of country life, etc.

We respectfully submit the foregoing suggestions, fully conscious of their limitations, in the hope that some little helpfulness may be found in them.

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A COURSE OF STUDY FOR RURAL SCHOOLS.

A course of study for country school children should be framed with direct reference to the actual conditions that prevail in country life and, in large measure, determine it. Among the most important points to be kept in mind are the following :

1. *There is a general lack of appreciation of the immediate surroundings.*

This is not peculiar to country people ; it is simply a fact in the country, as it is in the city. Education can confer no greater boon than that of showing how the real pleasures of life may be derived from one's own immediate surroundings, and from the work he is called upon to perform.

2. *There is an almost total lack of scientific skill in farm work.*

The prejudice against farm machinery has been extremely strong. Farmers have been forced into using it because other vocations have drawn away the help that formerly was depended upon for hand labor. The treatment of the soil is, in the extreme, unscientific. The American farmer, in this respect, is scarcely ahead of the Chinese ; his unscientific methods have made him the target of every caricaturist. In this, and in a score of other ways, the farmer pays the penalty of his ignorance.

3. *In the country there is great dearth of social life.*

This, more than hard work, deprives the country of its strength. Bad roads are largely responsible for the present social condition. In many places farmers, and especially the wives and daughters, live in dreary isolation for more than half the year, because no means of travel yet invented will master the mud of country roads. To properly recognize the foregoing conditions, therefore, it would seem that a course of study should contemplate three lines of interest :

1. *In the earlier years, especially, great attention should be given to the picturesqueness and natural beauty of the surroundings.*

Without trained and careful effort in this direction, the intensely practical character of their contact with the various things about them will close the eyes of the children to many beautiful things that should be a source of joy and pleasure throughout life. Much out-door study should, therefore, be encouraged. The children should be familiar with every brook and waterfall ; with every cliff, wooded copse, and ravine. The hills, cloud-capped, basking in sunshine or glistening with snow, should be permitted to work their silent influences into the children's lives. The country pupils are not naturally insensible towards these scenes ; but the usual tendency of school life is to belittle and destroy all kinship that the children may originally feel for the beautiful. As an adjunct in this phase of study, drawing, painting, and modeling should hold at least equal place with reading, in these early years.

2. *To supply the demand for scientific skill a good deal of attention should be given to:*

(1) *Mechanics.*—Pupils should be taught enough of practical mechanics to enable them to ward off the legion of fakirs that beset the farmer with their labor-saving (?) devices.

(2) *Manual Training.*—Scarcely a day in a farmer's life passes when there is not some demand made for skilled hand work with tools. The "stitch in time" on the farm is frequently fatally delayed when it involves a trip to a neighboring mechanic.

(3) *Mathematics.*—The farmer suffers more loss today from his ignorance in this subject than any other. Bookkeeping, as applied to farm accounts, should be carefully taught. Taking the amount of money at stake on the farm into account, no other business in the world tries to get along with so little bookkeeping. As a natural result, there is infinite waste in a hundred ways that are unnoticed. The time has come when the farmer must learn the lesson that the merchant already knows, that, if he is to gather a competence, or even earn a livelihood, it must be done by a careful saving of *small* margins of profits

upon all the things with which he may work, instead of by large gains upon a few things. Few farmers, simply because no accounts are kept, realize that badly stacked hay and grain, poorly fed stock and illy cultivated fields result in actual cash loss, just as surely as though the money were spent at the gaming table. The arithmetic of the farm account would be of incalculable value to the farm boy if he learned nothing else. The study of form and elementary geometry should be made very prominent. Every farm boy should be taught the elements of trigonometry and surveying. He should know how to "run a line," and how to lay off fields so that the same may be worked to the greatest advantage. He should be taught how to lay out roadways at proper grade, and how to make them. Nothing would hasten the era of good roads more than to show the farmer how much loss in actual cash may be charged to bad ones, through loss in harness, vehicles, horseshoes, horses, and time.

(4) *Biology*.—To show the splendid opportunity before every farmer of intelligence for study in this field, it is only necessary to cite the fact that it was by a close study of domesticated animals and plants that Darwin was able to probe the mysteries of life more profoundly than any before him. It is by no means necessary that the farm boy should study the sunshine only to find its value in pounds of beef; by the nature of the case he is, if intelligent, brought into closer touch with the great problems of life and energy than any other being. It would broaden, not diminish, the scope of this interest if from boyhood he were to learn everything possible about the care and scientific feeding of animals; if he were to learn exactly, for example, how to feed for beefsteak, and how to feed for butter, with the greatest economy. The study of plants would furnish an interesting analogy. The selection of seed; the cultivation of crops with due reference to roots and top; planting, care, and grafting of fruits; the relative value of forage, grain, and other crops, and many similar topics, are subjects for exhaustless study, every hour devoted to which would bring actual cash returns, and at the same time furnish a broad basis for an understanding of the plant world.

(5) *Meteorology and Physics of the Atmosphere*.—By a careful study of the maps and, other materials supplied by the United States Weather Bureau, every farm boy should learn something of the nature of the great storms that are likely to visit his region. A careful study of the weather maps, supplemented by good collateral reading, would leave very little to be desired in his geography.

(6) *Mineralogy*.—The composition, the origin, and the treatment of soils, how their productiveness may be renewed and conserved. The relation of the soil to the underlying rock. The origin and relative value of the native rock. The geological history of the country.

(7) *Chemistry*.—A practical knowledge of the principal elements which enter into the soils, plants, and animals. The chemistry of foods.

These subjects should be presented not only from the economic, but also from the more strictly scientific or philosophic side. Because "Man shall not live by bread alone," he has always despised the science of bread for bread's sake. Country children, as well as all others, must be allowed to have an insight into the deeper and more general problems of creation if they are to be satisfied with their work. An intelligent study of nature from the economic standpoint inevitably involves a study from the scientific side also.

It would be a service of inestimable value to the rural schools, and, for that matter, to schools everywhere, if the many government publications bearing upon the studies of nature could be placed in libraries easily accessible to teachers and pupils. The best of these should be in every schoolhouse as books of reference. These works are worth a great deal more than many of the text-books that are far more pretentious.

3. If the country is ever to acquire that refinement which the human being feels it is his right to possess, it must grow it. There are those who believe that, some time, the

great tide of youth that is now pouring in upon our cities will turn back upon itself, and thus carry to the country the culture that the soil could not of itself produce. It is not to be. Those who are once engulfed in the vortex of the city never go back; and if their children or children's children are by some chance cast out upon the country, they must begin life afresh, as did the primeval man.

Certain physical conditions that now prevail in the country must be improved, or social progress will be forever stayed. The chief of these obstructive conditions is the unspeakable system of roadmaking. Good roads, with their natural *sequela*, would practically solve the problem of country life. They would mean hours of social intercourse instead of hours of dreary, monotonous solitude. They would mean free delivery of goods from the stores in towns. They would mean free and daily delivery of mail. Better have three- or even four-cent postage, if necessary, with free delivery every day, than one-cent postage and the "catch-as-catch-can" delivery of the present time. Good roads would mean the rapid extension of the trolley-car system, which would reduce to the minimum the labor of exchange of commodities between one locality and another, and between country and town. As in the city the attention of children is being directed more and more to municipal affairs, so in the country let the children study practically all these conditions, which lie at the foundation of their physical, intellectual, and moral welfare.

Whatever else the course of study may do, let it breathe hope for the country boys and girls; not the hope of a life that, to be realized, must be lived in the city, but let it rouse the anticipations of a life that has its background in the sunsets, the hills, the woods, the orchards, and the waving grain fields of the country. A genuine life, intelligently lived, alone can bring culture. Whether the instrument of living is the plow or the pen, it matters but little; the furrow well turned, and the line well written, are both fundamental and absolutely uninterchangeable in human society.

Country life, not less than that in the city, may have its aspirations that are truly noble. The schools must not confuse or destroy these by trying to "citize" the country or by seeking to "countrify" the town.

The city and the country express the equation of life; a weakness in one member means the ruin of both. Each must supplement, but not destroy, the other, and both must be preserved.

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APPENDIX H.

THE FARM AS THE CENTER OF INTEREST.

Nowhere on earth has a child such advantages for elementary education as upon a good farm, where he is trained to love work and to put his brains into work. The best-taught school in a densely populated city can never equal in educative value the life upon a good farm, intelligently managed.

The child on the farm is made responsible for something, for some work, for some care-taking, and out of this responsibility grow trustworthiness, habits of work, and a feeling of personal power in all the essential elements of character, with the exception of those much-needed phases that spring from personal contact with society outside of home.

The surroundings of the child upon the farm in contrast with the complexity of city surroundings are comparatively simple; the same forms, colors, sounds are repeated in endless succession, presenting innumerable variations and at the same time complete harmony and unity. The trees, the shrubs, the foliage, the flowers, the fields, the hills, val-

leys, plains, and brooks create distinct, everlasting images in the child's mind; images impressed, concentrated, and expanded by countless sensations, by countless contrasts, that stream in through every avenue of the soul.

Then, too, everything appeals to the child as useful or non-useful. Farm work means the necessities of life, the comforts of home, the possibilities of an education. The reaction of the child upon his environment is the main thing, however; his power to conquer nature with his own hands and mind, together with continual lessons which bring home to him the inevitable action of and his dependence upon the laws of nature, as they assist, or as they baffle, his efforts.

The child enters school with senses keen, character in full tide of formation, and the impulse to act fully organized. He has, besides, acquired a comprehensive knowledge of his environment. This instinctive, spontaneous growth should go on and have full opportunities for complete development.

The statement of what a farm does for a boy in its general lines may easily be taken from the experience of a farm boy in New England, for instance. It is possible for me to give the story of such a one from actual experience—what he learned, what he studied, and what he acquired.

The scene is upon a rocky farm in New Hampshire; the boy an ordinary child, such as you may meet anywhere in this world of ours. As soon as he found himself upon the farm, at eight years of age, he began to study—to study in the best sense of that much-abused word. He began the study of geography—real geography. He observed with ever-increasing interest the hills, valleys, springs, swamps, and brooks upon the old farm. The topography of the land was clear and distinct; its divisions into fields, pastures, and forests were to him the commonest facts of experience. The image of the whole farm and all that it contained is one of the clearest and most distinct memories in his mind today.

The boy not only studied geography, but the foundations of geography, geology, and mineralogy. He knew in an elementary way the nature of the soils; why one field was better than another for a certain crop, and began to reason upon cause—sunshine, drainage, drought, and fertilization.

He studied botany. All the kinds of grasses he knew—timothy, clover, red top silver grass, pigeon grass; how they were sown, how they came up, grew, were cut, cured, and fed to the cattle; what kind of hay was best for sheep, and what for oxen. He knew the different weeds, too—the rag weed, smart weed, pig weed; he had a practical knowledge of these from close contact, with the hoe and his bare hands. This knowledge of plants took in medicinal herbs—caraway, camomile, catnip, docks, worts, and mints, lobelia, pennyroyal, and garget. These practical lessons in herbs were doubly impressed, sometimes in a painful way, although they were intended to relieve pain.

The flowers that grew on the farm and surrounding farms, wild and cultivated, hollyhocks and lilacs in the garden, the golden-rod and violets of the pasture, and the sweetest flower that ever blossoms, lifting its delicate petals close by the snow banks in the early spring, the harbinger of the resurrection—the trailing arbutus, taught him lessons of beauty, trained his eye for color, deepened his reverence for God.

He knew the trees—the maple with its sweet burden of spring, the hemlock, and the straight pine which he used to climb for crows' nests. He noted the difference in woods, and their value. As soon as he could wield an axe he cut the trees for lumber, fences, and firewood. With all the shrubs he was acquainted; in fact, he got an elementary but very useful classification that has made the subject an interesting one throughout his life, and prepared him to appreciate the practical value of botany in the schools.

He studied zoölogy, too. The animal life of the farm was very close to him. The brutes were his early companions. The domesticated animals he knew—the frisking lambs, the knowing and antagonistic buck, the tricky mare. He helped to break steers, to kill hogs, to hunt for eggs, to feed the chickens. He knew the wild animals, the squirrels, the rabbits, the woodchucks; the insects, the grasshoppers, and ants; bugs that scurried away when he lifted a stone.

With the birds he was intimately acquainted—the wrens that built their nests in the barn and sheds, the robin redbreast, the shrieking blue-jay, the tiny warblers in the woods, the wise crow, and the timid partridge that would give her life in defense of her young.

He had a practical knowledge of meteorology. He could tell the time of noon upon the instant, by two infallible monitors, his stomach and his shadow. He could foretell storms with nearly as much wisdom as is exercised by the Weather Bureau. The coming of a shower was known to him—the hurry-scurry to get the hay into the barn. The long, steady breezes from the east brought on the storm, and a storm was a welcome thing to a boy on a New England farm! It meant a day of perfect delight on the dear old river. The ostensible purpose of the boy was to catch a few small fish—the real purpose, worship, alone by the rushing floods, the quiet pools, the pebbly beaches, and the silent woods.

In fact, every subject now known in the curriculum of the university this boy studied in an elementary way. He was really grounded in these studies. He observed, investigated, and drew inferences, perfectly unconscious, to be sure, of what he was learning, or how he was learning; but still, he learned, and he studied, and the best lesson of all was his personal reaction upon his environment. His plowing, hoeing, haying, digging, chopping, lumbering, his mending of sleds, and making of cider, sugar, lye, and soap were all so many practical lessons in life which exercised his body, stimulated his mind, and strengthened and developed his purpose in life.

He lived to become a school-teacher, and taught school earnestly and bunglingly for twenty years before he had even a suspicion of the value of his farm life and farm work.

How the work of the children upon the farm is to be brought into the school, concentrated and expanded; how this great, spontaneous, ever-increasing interest is to be made use of; how this organized energy is to be turned into the main life current, are questions of questions. It is the imperative duty of parents and teachers to determine how the farm life of the boy and the girl may be recognized by use in the schoolroom. Which of all the studies the boy has begun should be discontinued? Are they not all essential? Must they be held in abeyance until he reaches the door of a high school or a college? That the child begins them spontaneously and instinctively is argument enough for their continuance.

Without attempting a course of study, I may be allowed to make some suggestions. In these suggestions I present only the common and common-sense things needed in farm work and farm life, and endeavor to show why they form the substantial basis of all study.

GEOGRAPHY, GEOLOGY, MINERALOGY.

The child's knowledge of geography may be made the basis of all his further study of that subject. He brings into school geographical images of the farm and the surrounding landscape. He is tolerably well acquainted with the topography of his district and, it may be, of the town. First, find out how much the pupils really know of these subjects. Get them to describe the farm or any part of it. How many fields are there? Where are the pastures? The woods? What are you raising in each field? How many cattle have you? Describe them. Tell about the sheep, the horses, the hens. Get pupils to sketch the farm on the blackboard, paper, or slates.

A pile of sand in the yard might be used for modeling the farm, showing hills and valleys, plains and brook basins. In winter rough boards with raised edges might be used for sand modeling. Later, chalk modeling should be used to indicate the relief of the land.

The beginning of political geography by the divisions of the farm into fields and pastures may be made. The lay of the land, the relative positions of these, form good lessons in the points of the compass. Pupils would compare one farm with another, so that in time they could model and draw the whole district, including the roads.

If there is a stream in the neighborhood, it may be used as a study of the brook basin, the wearing of water—a good introduction for geology. The examination of the soil after rains, especially loosened soil, may be studied to show the effect of storms in erosion. The dip and formation of the surface, division into hills or plains, bottom lands, and bluffs, may be related to the working of the stream.

The study of mineralogy may begin with the study of soils, the kind of soils, and the forms of the grains. Specimens of gravel, sand, loam, vegetable mold, clay, and rock should be brought by pupils to school and studied. How is vegetable mold formed? What in the soil is useful for plant life? How does the soil change through vegetation and under cultivation, and also under the action of heat, water, frost? It is easily seen that all these are elementary studies in weathering—dynamical geology.

If there are rocks on the farm, they may be studied; the archaic rocks, the secondary rocks, the strata, and the dip of the rocks—all so many points of introduction to geology. Boys on the farm will know something of the mineral on different parts of the farm, in different fields. In general the bottom land is the richest, and the question might easily be asked, Why? In this relation uses of the different kinds of soil may be studied. Questions of why one crop will grow in one portion of the farm, and not in another, and why crops should change or rotate from year to year, should all be brought in.

Housekeeping, butter and cheese-making, cooking, gardening, and affairs pertaining to home economy should be taken into the school. Draw and describe your garden. Divide it into beds. Locate the flowers, the vegetables. Sketch your hens, the turkeys. How do you make bread?

METEOROLOGY.

Elementary studies in distribution of heat would come through the changes of the seasons. The shadow stick may be used, showing the changes in the sun's position relative to the earth. A sun dial on the schoolhouse should be made. The daily changes in the sunlight coming through the different windows may be measured through shadows on the wall. It is a very easy matter to get the daily weather reports and examine them. Every country school should have a thermometer, barometer, anemometer, and rain gauge, to measure the force of heat, the weight of the air, the velocity of the wind, and the depth of the rainfall. Pupils should make weather reports day by day and compare them with the printed weather reports. The elementary study of air and its composition should be made; its weight, direction, and velocity. The study of evaporation of water, followed by the forms of water in the air—fog, mist, and cloud, should be made. Pupils may be called upon to make daily prophecies of the weather, and give their reasons for the same. Every change of the atmosphere, shower, rain, hail, snow, or wind may be taken advantage of for this purpose.

The uses of water may be discussed, especially the uses of water for vegetable life; the drainage of the land, especially on farms where the land has to be tiled, or where irrigation is necessary. Questions like these may be subjects of investigation: How far does the water go down into the earth? What stops it? The cause of a spring? A brook, creek, rivulet, or river? The saturation of different kinds of soil and rock by water.

Depth of the wells and changes in the water level. Into this discussion would come the question of floods and flood plains, and of silt brought down by the water, how and where deposited, that is to say, if there is a creek or a river on or near the farm.

These are some of the innumerable points in regard to meteorology that impinge on the child from all sides, and lead to higher and more difficult questions and investigations.

PLANT LIFE.

I should place first in this study the crops upon the farm; the study of the corn; its history; its nature; different kinds of corn; the uses of corn. The same may be said of wheat, oats, rye, and barley. How land should be fertilized for different crops. Study of the food of plants, nutrition, etc. The grasses may be studied; different kinds of grasses brought into the schoolroom.

In the spring germination of seeds may be especially noted. Seeds should be planted in boxes in the schoolroom. It would be an excellent plan to have a half-acre garden near the school, in which the experiments could be performed, and in which the farmers of the district would take a deep interest. The garden could be made of value, and should include everything that is raised on the farm. There should be a preliminary study of plants, especially flowers, in regard to function. Little or no attempt, at first, should be made to close analysis, or to classification. The guide in the elementary study of all subjects should be function.

Forests; different kinds of trees on the farm; leaves, and bark of the trees; deciduous and non-deciduous trees; the uses of wood for heat, shelter, and household furniture.

ZOOLOGY.

The study of domestic animals and their functions; cows, and different kinds of cows; milk, and how milk is changed to butter and cheese. The history, for instance, of butter and cheese-making, from the old-fashioned churn to the creamery. Study of horses, and sheep; use of wools; meat of different animals. Study of wild animals, birds. Get each pupil to make a list of all the birds he sees upon the farm during the year; when they come, how long they stay, when they depart. This would bring observations in regard to migration. Name the birds staying upon the farm all summer. Where do they build their nests? How do they raise their young? What do they eat? What birds are injurious to the farm? What birds are useful? The pupils could learn many a profitable lesson; would find that most of the old ideas about birds are totally wrong; that many, if not all, of the birds that have been counted mischievous are really helpful; that birds are needed on the farm to kill destructive insects; that the little damage which crows, for instance, bring about is comparatively nothing to the good they do; that the birds are really "nature's militia" to destroy the enemies that menace the life of vegetable, plant, and tree.

Another study is that of destructive insects; the wood-borers, the cankerworms, the weevil; a very practical study. Then there are the bees, wasps, butterflies, and their uses in efflorescence. The wonders of honey-making. The earthworms and the effect they have upon the soil. The boy will be sure not to leave out the woodchuck, the fox, the coon, or the muskrat. He may even learn that the unpleasant little skunk has a use and a place in the world.

PHYSICS AND CHEMISTRY.

Wherever forces are seen, felt, or handled, an inquiry into the nature of such forces is the study of physics. Meteorology is one of the great departments of physics. Distribution of sunshine, the working and nature of heat, the force and wearing of water, measurements of air, of the wind, are all close to the child, who needs only good teaching to lead him to close and closer investigation.

Practical uses of force suggest many problems: force of running water; running mills; force of wind is turning windmills; the economical application of force in farm machinery from the apple-parer to the reaper; the mystery of the lever revealed by wedge and crowbar; the turning of the grindstone; and the use of the jackscrew in raising buildings.

Chemical changes are taking place in earth, air, and water, and are continually applied in the household affairs. The teacher has an excellent opportunity to call attention to the chemistry of cooking; to yeast; to milk in its transmutation to butter and cheese; the making of lye and soap; the oxidation of metals. The composition and nature of different soils are a fruitful study; the effect of sunlight upon foliage in the production of leaf green; the transpiration of water through vegetable tissues, bearing nutrition from cell to cell. The burning of wood and its change into ashes.

The children upon a farm are called upon to apply daily the laws of chemistry and physics. It is the province of the teacher to lead them to apply these laws more and more intelligently, to the end that a deep interest is aroused and they are made earnest and everlasting students of these subjects.

MATHEMATICS.

There can be no work properly done upon the farm without measuring. Most of this measuring is done by what is called "rule of thumb," or so-called practical judgment. The farmer estimates weight of cattle, hogs, or sheep by sight. He can tell how much cord wood or timber a certain area of forest will produce. In fact, measuring in everything he does is absolutely essential. There is no better way for the teacher to study the processes of measuring, or arithmetic, than to inquire into the everyday demands of farm work, and no better way to teach arithmetic than to bring the measuring necessary for farm work into the schoolroom. The elementary work, and the work that ought to be continued throughout the course, should be largely estimation with eye and hand, of length, of distance, area, volume, bulk, force, and weight; the estimates to be verified by actual measurements. That which a farmer is called upon at every turn to do should be begun with the children. And here the parent can supplement the teacher at every step.

When developing the mode of judgment, the pupil should be trained to use the chain in measuring areas, the yardstick in measuring cord wood, forceps in lumber, dry measure for grain, scales for weights, liquid measure for milk, vinegar, or molasses.

The outcome of all raising of crops is commercial value. There should be a system of farm bookkeeping, in which writing and arithmetic play a prominent part. Children could be easily trained to keep books for their parents, and the work of the farm be made to present all the problems and conditions for a complete mastery of all essentials in arithmetic.

READING AND LITERATURE.

The suggestions already given are for the elementary study of subjects. Interest in all these subjects will lead directly to a great desire to know more of the observations and investigations of others. Here reading and the study of text-books have their great place. The first steps in reading may be short stories of the farm, of the crops, of the animal and plant life, written in simple sentences upon the blackboard. The reading lessons should be closely related, and from beginning to end bear directly upon the subjects the child studies.

Nor is there wanting a great and extensive literature on geography, geology, mineralogy, and botany. Books like "The Soil," written by F. H. King, University of Wisconsin, and "The Great World's Farm," by Salina Gaye, would arouse an intense interest if the subjects here named were really used for the education of the child. Poetry may be brought in at every step — the poetry of the farm, the clouds, the air, the winds, the

flowers, the fields. The pupil will find that the poet and the artist have embalmed in deathless prose or poetry the commonest things of earth, air, and water by which he is surrounded. Thin, vapid, sensational, injurious reading would have no place in his life if all reading were carefully selected in the direction of his aroused, sustained, and educative interests.

The process of learning to read is a very simple one, if the free, spontaneous action of the mind is not obstructed by abnormal methods. When the proper stage of development, which manifests itself in an intense desire to gain knowledge through the printed page is reached, the child will learn to read as easily as he has already learned to hear language. All reading should come close to the child, should enter into his personal experience; should be about something he feels the need of knowing—facts about his pets, about things he loves to do—words that re-image familiar scenes. This would make reading and the selection of good literature a habit for life.

WRITING, GRAMMAR, SPELLING.

Writing is one of the modes of thought expression. The fundamental necessity is *to have something to express*, some image to control and steady the hand, some earnest desire to communicate with others by means of writing. Skill in writing takes care of itself if the teacher writes rapidly and well. Technical skill is nine-tenths imitation. The main thing is the impulse which the teacher discerns, seizes upon, guides, and controls. The farm is rich with interesting subjects, rich for the novice of six, or the pupil of sixteen. Descriptions of animals, plants, forests, fields, pastures, hills, valleys, soils, the germination of seeds, the gardening, the shower, the clouds, the rainstorm, hailstorm, snowstorm, the cyclone, the raising of crops, the cutting and curing of hay, the harvest, the market—these are among the innumerable subjects that may be made of intense interest to the children of the country. The little ones may write a word, a line, or a paragraph; the older ones, pages.

And in such work comes the one sensible method of teaching spelling and grammar. Writing is spelling and punctuation, just as speech is fundamentally pronunciation. Using correct language is grammar, and where can pupils use correct language to better advantage than by writing under the direct impulse of thought?

MANUAL TRAINING, ART.

One central and invaluable thing gained on the farm is the necessity for and habit of work. All work on the farm should be honored in the schoolroom by expanding and concentrating it. The school should send back the children to the farm filled with the dignity of labor.

The work of the farm, in a broad sense, is manual training, but most farm boys get a coarse way of doing manual training. They do not learn to use their hands expertly as they should. On all farms there should be workshops for the mending of tools, construction of materials and apparatus for farm work, and in the country school there should also be a small manual training department in which pupils may be trained to use their hands skillfully in making things needed for the farm and the home.

No argument is here made for manual training; I would, however, enter an earnest plea for its adoption in the school on the score that it would make labor both honorable and interesting, and that its value as a potent factor in the development of the brain would be recognized and appreciated by both parents and teachers.

Apparatus for experiment could be made with a small outfit, a bench, a few tools, lumber, and metals. Much of the lumber could be brought by the pupils from the farm. They could cut the wood. If it needed sawing, it could be sawed at the mill. Wood manual training is one of the best ways to learn the uses of woods. There should be a small forge, and some work in iron and other metals as well. Every boy and girl should

have a work bench at home and wood-carving materials, to develop the instinctive habit of whittling into something useful and ornamental. Long winter evenings could be profitably utilized in manual training and the exercise of the arts.

The objects of art are countless, the modeling, painting, and drawing of land surfaces in geography, and illustrations in geology and mineralogy. Landscape and plant life furnish a great number of subjects for painting. Children have a perfect passion for drawing, until it is crushed by over-attempts at accuracy, or by the drawing of flat copies. With a good blackboard, which is the best piece of educational apparatus ever invented for school or home, children could show the different kinds of crops; draw cornstalks, grasses, flowers, and trees. Of course, these drawings would be crude, but at the same time they would be satisfactory to the child, and justly, for they would correspond with his images; the drawing, in turn, would stimulate observation, and the result would be clearer insight. Exact drawing could be introduced in measuring, or arithmetic, and in making projection drawings or manual training. Experience has shown that children take great delight in such work, and that is in the highest degree educative.

Art study leads to the cultivation of taste, and many farmhouses, many cold and desolate sitting-rooms could be made beautiful by the art of the children; and their comfort enhanced by the manual training. Every effort should be made to project the work of the school into the life of the child. Invention may be stimulated by asking pupils to plan a hen house, wood shed, barn, farmhouse, and the selection of trees and shrubs to beautify yard, garden, and landscape.

INDUSTRIES AND COMMERCE.

The study of the commercial side of farm products should have its place in the school. The cost, the selection, the use of crops, and their value in selling. Here arithmetic and bookkeeping would come in. Transportation of crops would have its place, the team, the railroads. Where farm products are consumed. The subject of farm tools, instruments of work, may be studied. How crops are prepared for the market; the question of mills; the preservation of foods; barns; winter protection of cattle; ensilage. Transportation, beasts of burden, wagons, railroads, steamboats, in our own and foreign countries. The beginning of history, how others live and have lived, is involved in this idea of commerce.

The geographical distribution of soil may be considered, as well as the distribution of air, moisture, heat, and plant life, and through the careful and thoughtful study of the farm the whole earth, in time, may be brought to the child.

HISTORY.

The elements of history are everywhere present on the farm. The history of farming tools, from the sickle to the reaper; from the crude plow of the poet to the steam plow of today; from the hoe to the cultivator. The history of butter-making, from the old-fashioned churn to the model creamery. The story of the mill; the history of the potato; of maize; of the tomato. How beets are now competing with sugar cane. If there is an experimental station in the neighborhood, it should be used as an auxiliary to the school, where the history and present status of agriculture may be studied.

Most towns in the eastern states, and some in the West, have interesting local histories. There are generally stories of the Indians, of settlements, of colonization, of noted men and women, of the part taken by the citizens in the Civil War. A strong love for history can be induced and fostered by beginning this study close to the home.

The breakfast and dinner table furnishes excellent starting points in the study of history. How much does the farm in itself furnish of the food of the family? What is obtained outside, and where is it obtained? History of the making of cloth, the story of the spinning wheel and the spinning jenny; the hand loom and the power loom. The

study of the inventions used on the farm will lead directly to the biographies of their inventors and the relation of machinery to human progress. The history of roads and road making, back to the time of the Romans. There should be lessons in every school upon the necessity and practicability of good roads, and the best methods and material for making them.

CONCLUSION.

The tremendous advantage of a rational course of work in country schools is that it would make a strong, binding union of the home and the school, the farm methods and the school methods. It would bring the farm into the school, and project the school into the farm. It would give parent and teacher one motive, in the carrying out of which both could heartily join. The parent would appreciate and judge fairly the work of the school, the teacher would honor, dignify, and elevate the work of the farm. Farmer and housewife would be ready to discuss the methods of the farm and housekeeping in the school. Children, parents, and teachers could meet at stated periods and hold discussions in the direction of their highest interests. One of the best meetings I ever attended was a union of grangers and teachers in Oceana county, Mich. One hour was devoted to a discussion of how to raise potatoes, and the next was given to the education of children.

The farmers would become deeply interested in having libraries in the schools, carefully selected. Long winter evenings could be spent around the fireside in mutual study; parents helping children, and the children, in turn, arousing and stimulating parents.

Country life too often fails in the proper social conditions. It tends to isolation. A common purpose of education would obviate this. The farmer would often invite the school to visit his farm, and to study it. Pleasant and profitable social meetings would be the order of the day. The teacher with clear ideas of what education ought to be would bring the people of a district together to discuss the welfare of their children. Exhibits of pupils' work, of manual training and the arts, would naturally follow and greatly increase the interest.

It is an indisputable fact that cities draw largely upon the country for men of action and affairs. There are, no doubt, some notable exceptions to this rule, but in the main, the leaders, both men and women, successful manufacturers, bankers, doctors, lawyers, ministers, statesmen, have received their early education upon the farm or in the workshop.

Education deserves to be regarded in a broader and more rational light. Real education should be read in terms of character—character translated into action. Sound judgment, common sense, wisdom acquired by observation and tempered by experience, with genius to help one's self, and power to plan and execute, entitle a man to a diploma from the world at large, if not from a university. Education which is worthy the name generates the power that penetrates life and makes it better.

No method, no system of schools, no enrichment of courses of study, not even the most successful of teachers, can ever take the place in fundamental education of the farm and the workshop. No matter how good the city schools may be, or may be made; no matter how good the state of society may be—the vital reinforcements of city life that lead to progress and prosperity, so far as we can see, must always come from the sturdy stock of the farm. This fact, upon which most educators agree, puts upon the country school an immense responsibility. It is no small office to train the men and women who are to lead and guide the future of the Republic.

The country schools have every advantage, so far as material means are concerned; their environment is rich in organic and inorganic forms; but in one thing they are lacking—the teacher who can utilize that which offers itself in such abundance. This is a want which every thoughtful person deploras, a want that will be met when the farmers themselves realize what a powerful influence for good their schools may be made.

When skill, expertness, and insight control the methods of country schools; when excellent teachers remain in the same schools year after year, the already powerful influence of country life upon the destinies of the nation will be mightily enhanced.

A large majority of boys and girls upon the farm entertain mistaken notions of life in cities, and early form a desire to enter into the seemingly greater advantages to be found in such centers. This leads to the congestion of cities, and disturbs the social balance. School education alone can cope with this disease of the body politic, and this by fostering an interest in farm life and farm work.

Boys must be led to see something more in farm life than patient, continuous work of planting, sowing, care-taking, and reaping. Many a young man leaves the farm to become a mere counter-jumper in the city, who, if he had the right education, would make himself an influential and successful farmer.

My plea, then, is that the country school should make farm labor and all labor honorable; should dignify it; should show that the environment of the country furnishes inexhaustible resources for intellectual life; should see to it that the æsthetic side of child nature be assiduously cultivated; that the child bring a loving heart to nature, have an appreciative eye for beautiful things; that he be led to see the possibilities in the landscape of the farm—the necessity of making excellent roads, well lined with shade trees; that the so-called practical things of life, hard and severe labor, should have their highest outcome in the cultivation of the love of the beautiful in life—that love which leads the soul to profound reverence for all things of earth, because they are loving gifts of an infinite God.

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APPENDIX I.

THE COUNTRY-SCHOOL PROBLEM.

[A paper read before the National Council of Education, July 10, 1894, by Emerson E. White, LL.D.]

It is not my purpose to deny or obscure the real difficulties involved in what is called "The Country-School Problem." This is not a question of nomenclature, but a problem of school organization under special conditions.

The problem may thus be stated:

Given a school of twenty to forty pupils from five and six to, say, sixteen years of age, accommodated in one room and taught by one teacher.

To find the best possible organization and administration that the conditions will permit.

The facts that enter into the problem are (1) that the pupils possess very unequal ability and attainments, and those who at a given time are nearly equal in attainment make unequal and varying progress; (2) that the pupils need instruction and training adapted to their ability and needs each successive term, and hence this instruction must have *sequence*, thus permitting progress; and (3) that the health and physical endurance of teacher and pupils limit the daily school session to about six hours. It is also to be kept in mind that the problem involves the providing of the best possible instruction and training, not in one branch, not merely in "the three R's," but in all the essential elementary branches.

I. NON-CLASSIFICATION SOLUTION.

The first solution proposed makes no provision for the classification of the pupils, but each pupil is taught by himself in all branches of study. It is seen that this plan gives as

a minimum as many separate teaching exercises as there are pupils in the school, provided each pupil has only one daily lesson. If only "the three R's" are taught, and each separately, there will be three times as many teaching exercises as there are pupils, and, if the three exercises for each pupil are combined in one, the length of time devoted to each exercise must be increased. But the modern programme of school instruction includes from five to seven school arts, and, in case of the more advanced pupils, several additional branches of study, as geography, English grammar, history, and physiology.

It is unnecessary to take time to show that it is not possible for one teacher to instruct twenty or more pupils, each by himself, in the essential elementary branches. The number of exercises thus required reduces the length of each to so short a time that no efficient instruction is possible; and hence the non-classification solution proposed for the country school may be dismissed as *impracticable*. The plan of individual instruction is only feasible in a school composed of very few pupils.

We sometimes hear of the old-time country school in which there were no classes, each pupil being taught by himself, if taught at all; but I am satisfied that this school exists in the imagination, and not in history. If it ever had an existence, it certainly preceded the organization of the common school, if it did not precede any school composed of more than ten pupils. Even ten pupils under one teacher necessitate some classification to permit any efficient instruction or drill.

My father was a pupil in one of the early common schools in New England, and I was a pupil in a still more primitive school in the then backwoods of Ohio, but neither my father nor myself ever saw the wholly unclassified country school of which the present generation of teachers is hearing. In at least two of the three *common* branches—*i. e.*, branches common to all—the pupils in the old-time school were classified. It is true that little attempt at classification was made in teaching the ABC's or the *a-b-ab's*, but necessity forced an early classification in both reading and spelling—imperfect, it is true, but necessary and helpful. I now see in my mind's eye the row of big boys and girls that sat on the back seats and read together in the old English reader, and I also see the rows of boys and girls, who constituted the successive classes in spelling, standing on the floor and "toeing the mark."

No attempt was made in the first schools which I attended at classification in arithmetic, and later the attempt was first confined to the multiplication table, which few pupils perfectly mastered, and so common drills were feasible. As a rule, each pupil "ciphered" by himself, at his own gait, going to the teacher or some pupil for assistance, when needed. The fact that most of the pupils never reached fractions, and fewer ever acquired much skill in integer processes, is evidence of the weakness of individual work even in such a study as arithmetic.

A few clever pupils who needed only opportunity for study made good progress without instruction, sometimes remarkable progress, and this was not only true in arithmetic, but also in geography and English grammar, when these branches were reached. The lack of classification in these studies was doubtless an advantage to these few exceptional pupils, but no one who actually knows the old-time country school can commend the progress made by nine-tenths of its pupils. It is not too much to claim that its helpfulness to the great majority of its pupils was increased by improved and wider classification. I well remember the first introduction of classification in arithmetic in the rural schools of my native state. I now see the little blackboard that was first nailed to the wall of that primitive schoolhouse, for, though scarcely in my teens, I was installed as teacher for the first class formed in arithmetic.

When I passed from the dignity of a pupil-teacher to the honors of a teacher, my best work for the country school was in the introduction of improved classification—not only in reading and spelling, but in all the branches taught. Nearly all of the pupils fell

into groups or classes with positive advantage. Those who could work ahead with incidental assistance were permitted and encouraged to do so.

II. THE GRADED-SCHOOL SOLUTION.

Another solution proposed is the adoption of a graded course of study with term sections—the annual school session being divided into, say, two terms—the plan of grading adopted in most cities. In other words, the solution proposed is the grading of country schools with one teacher on the plan of the graded schools in cities.

It is seen that this organization divides an elementary course of study into at least sixteen sections, each including sections of the several branches, and it separates the pupils into sixteen or more corresponding grades, if there be a term interval between the grades.¹ The fact that the pupils in each grade study several branches necessitates as many class exercises as there are branches of study. It is thus seen that an average of three class exercises in each grade gives at least forty-eight daily exercises.

It is true that in practice there may be no pupils in several of these term grades, but the reduction in the number of classes thus occasioned will be fully offset by the fact that the pupils in several upper grades study more than three branches, and thus require more than three class exercises to each grade. It seems unnecessary to add that such a classification of the one-teacher school is wholly impracticable. I know of no successful attempt to grade the country school with a *term interval* between the grades.

The more common mode of grading the country school is the nominal adoption of the *year* or session interval between the grades. When this plan of grading is strictly adhered to, and there are pupils in all the grades, there are as many separate class exercises as there are year sections in the course of study multiplied by the average number of branches therein. This gives from thirty to forty class exercises—too many for satisfactory class instruction and drill. But in a school of thirty to forty pupils there are necessarily very few pupils in the upper grades, and none in some grades. These breaks are occasioned by the attendance of pupils only a part of the school session, by the failure of pupils to do the work assigned them, and other causes. It thus often happens that country schools may not *at any one time* actually contain more than five or six grades of pupils, even when they are following a graded course of study with eight- or nine-year sections; but the reduction in the number of class exercises thus occasioned does not make a strict adherence to this city plan of grading feasible. Hence in practice various modifications are made; and some of these are easily made if the school be not dominated by, and sacrificed to, the fetich called the “graded system.” Several of these feasible modifications may be worthy of consideration.

1. Since the several classes are all taught by the same teacher it is feasible to permit pupils to recite in different grades, strict grading being sacrificed to the best possible classification *in each branch*. Thus a pupil may recite in the fifth grade in arithmetic, the fourth in geography, and so on.

This modification of the graded system is practicable only to a limited extent in cities, since the several grades of pupils occupy, as a rule, separate rooms and are taught by different teachers, and they are thus required to keep a common step in *all* the branches of the course.

2. Since the upper classes in a country school often contain not more than two or

¹ N. B.—The term “grades” is used in this paper to denote those formal divisions of pupils which correspond to the more permanent divisions in the course of study, which are separated by transitional or promotion lines. The pupils in a given grade may be taught in one or more classes in all the branches, or they may be taught in one class in some branches, and in several classes in other branches; and these classes may be changed from time to time, and without reference to grade divisions or intervals. It is thus seen that the terms gradation and classification are not used as synonymous.

three pupils, it is feasible for a bright pupil to work ahead of his class while he continues to recite in it. Thus a pupil may be studying decimal fractions or denominate numbers while reciting with advantage in common fractions; for, while these daily reviews in common fractions may give him little new knowledge, they will increase his skill in fractional processes — and skill in numerical processes is the chief end of elementary training in arithmetic. Indeed, skill of some sort is the chief end of more than half of the exercises in the elementary school, and this requires *repeated action*. Experience shows that it is entirely feasible for capable pupils to work ahead of their classes in such studies as arithmetic, geography, history, etc., and that this is often successfully done with very little assistance. It is thus seen that the one-teacher school permits a happy combination of class instruction and individual work, especially in the case of bright pupils.

3. Another modification may be made in certain art studies, as writing, language, drawing, and singing. For the purpose of drill in these branches, a country school may readily be divided into three classes, and these, except in music, may be taught *simultaneously*, as will be more fully shown later. This arrangement not only reduces the number of classes, but it greatly increases the class practice of the pupils. Nor is it found a serious objection that the classes in these branches are, at any given time, two or more years apart. These arts have phases that correspond respectively to the three psychical phases through which elementary pupils pass as they advance in the course; and the wise teacher can readily so adapt class instruction and drill to the common needs of the pupils in each phase of progress as to afford to all valuable practice. This is successfully done in many country schools.

The feasibility of these and other modifications have saved the country school in many instances from the Procrustean evils that have so often characterized the graded system in cities. The defects of the graded system in cities does not necessarily inhere in the system as it may be practically administered in one-teacher schools in the country. The year interval between grades in cities well-nigh necessitates the "lock-step" advance of the pupils. The classes are too large (or are supposed to be) to permit the teacher to give needed assistance to the strong pupils who may be capable of working ahead in any or all of the studies of a grade, and, at the same time, the interval between the classes is too wide to permit the pupils, with very *few* exceptions, "to jump over" to the next higher grade. We have seen many city classes in which the pupils in the upper third of the class were in ability one year in advance of those in the lower third, and yet these pupils were chained together for one year, and then the only mode of relief was the non-promotion of the lower-third pupils, thus necessitating their going over again an entire year's work. Thoughtful teachers know what this means. The pregnant fact is that the year interval between the classes in elementary schools in cities is incompatible with a flexible classification of pupils. It is everywhere attended with a serious sacrifice of time and opportunity.

In the one-teacher school these evils of the graded system may be somewhat lessened, but, after all feasible modifications have been made, the system, with even a nominal year interval between the grades, is not a satisfactory organization of the country school. The modifications permitted relate chiefly to the classification and advancement of the pupils but the course of study must be followed. *The essential thing in the graded system is the graded course of study.* To abandon the prescribed sequence and co-ordination of the topics and exercises in the course of study is to give up the system *as such*. But experience shows that it is not practicable to prescribe an "invariable order" of topics and exercises for a one-teacher school. The limitations and conditions of such a school necessitate variations from the prescribed course in order to reduce the number of class exercises, and hence the course of study as well as the grading of pupils must be flexible. System and order must often be sacrificed to the needs of the pupils and the limita-

tions of the teacher. The adoption of well-adjusted courses of study for country schools has unquestionably resulted in great good, but the blind following of such courses in time and order has often resulted in loss. Much of the difficulty that has attended the graded system in country schools has been thus occasioned. What the one-teacher school imperatively demands is not only a flexible and adjustable classification of pupils, but a *flexible course of study*—that is, a course of study which permits changes in the order of topics whenever such changes will result in fewer class exercises with a positive gain in better instruction.

This leads to the consideration of a third solution of the problem before us, and this may be called —

III. THE THREE-GRADE SOLUTION.

The three-grade organization of the country school, or, if preferred, the three-department organization, is based on the psychical transitions which appear in an elementary course of training.

The first of these psychical periods includes the kindergarten and the lower primary classes, with pupils from four or five to eight years of age. This is pre-eminently the objective period of training in which primary knowledge is taught objectively, and primary skill in reading, writing, number, language, etc., is acquired by doing, largely by imitation. The reader is the only book needed by the pupils.

This is followed by, say, three years that may be called the transitional or middle period of elementary training. In this period pupils pass increasingly from concrete facts to their simpler generalizations, from processes to rules, and from the known to the related unknown by either imagination or thought; and skill in the several school arts is increased by practice under guidance, increasingly under ideals. The only text-books needed are in reading, arithmetic (first book), and, later, geography (elementary), and these, both in matter and method, should be intelligently adapted to the psychical conditions and needs of young pupils. This is pre-eminently the *fact and skill period* of elementary training.

The next three or four years constitute what may be called the advanced or grammar period. The pupils have now sufficient skill in interpreting written or printed language and sufficient thought power to study, with proper instruction, a complete arithmetic, a school geography, and later (seventh and eighth school years) English grammar, United States history, physiology, and the elements of natural science.

It is seen that the grading of the elementary school on this psychical basis is about the same as that secured by its division into three departments when the number of pupils is sufficient to employ three teachers—one for the lower or primary classes, another for the secondary or middle classes, and a third for the more advanced pupils.

This is a natural and simple grading for a country school with one teacher. The distinction in the work of the three grades or divisions is sufficiently marked to permit a definite statement of the knowledge and skill to be acquired in each; and, at the same time, the pupils in each grade can, from term to term, be reclassified, thus keeping the number of classes as few as possible and at the same time putting each pupil where he can make the most progress.

The number of classes in the two upper grades need not exceed two each in any branch, and not more than three separate classes will be needed in any branch in the primary grade—making not more than six or seven different classes in any branch, with an average of not more than four classes in the principal branches. The exercises in writing, language, drawing, and other arts can each be given *in one period*—a very important consideration, since it greatly reduces the number of exercises and, at the same time, secures needed instruction and desired progress.

The course of study can readily be arranged on the same basis. The studies and

exercises of each grade may be grouped, thus dividing the course into three well-defined sections—primary, middle, and advanced—and the attainments required for promotion from one grade to the next higher can be definitely prescribed. It is not necessary to divide the course into year and term sections with a prescribed order of subjects and parts of subjects for each term, as is often done in graded courses for cities. There should be a division of the course into three sections, with a general order or sequence of topics in each, but the teacher should be left free to form classes with varying intervals between them, and the progress of each class should not be fixed by a time schedule—as is sometimes done in city schools with many teachers. To reduce the number of classes in a given grade it may be necessary to take up parts of subjects in a different order from that laid down in the course of study, and no two classes may make equal progress.

The essential provision is that the work provided for each grade be completed *as a condition of promotion to the next higher grade*. This will establish a clear distinction between the several grades, and, at the same time, it will allow that flexibility of classification *between* grade lines which is essential in a one-teacher school.

It is not meant that pupils shall be stopped at the line that separates two grades until they have reached the standard in *all* branches of the lower grade, as is generally required when a school is divided into three departments, each under a separate teacher and occupying a separate room. In a one-teacher school pupils may and should be permitted to pass a grade line in any branch when they are prepared to do the work of the next higher grade. In practice it will be found that most pupils can, with advantage, cross the grade line in all branches at the same time, but this result should not be forced.

THREE-GRADE PROGRAMME.

A course of study on these three psychical grades of work and attainment makes a three-grade programme of class exercises and seat work both feasible and desirable.

I have elsewhere¹ presented such a programme, with a full statement of its uses and advantages in a one-teacher school. It must suffice to insert the programme here, with a brief explanation.

This programme indicates not only the class exercises, but also the study or seat work, the class exercises being denoted by bold-face type and the study or seat work by common type. The day session of the school is divided into periods of twenty, twenty-five, and thirty minutes each, the spelling drills in the two upper grades being considered one period; and the teacher's time is divided equitably among the three grades of pupils. The A-grade pupils have eight exercises each day, the B-grade pupils six exercises, and the C-grade pupils five; but, as is seen, the A-grade pupils have two more studies than the B-grade, and the B-grade pupils have one more study than the C-grade. The extra time required to prepare and direct the seat work in Grade C will make the time devoted by the teacher to this grade nearly, if not quite, equal to that devoted to the B-grade.

A rural school of some thirty pupils will probably have two classes in several branches in the A-grade, two classes in one or more branches in the B-grade, and possibly three classes in the C-grade; making in all some seven different classes of pupils. The time allotted to any branch (as arithmetic) in a given grade must be divided between the several classes (if there be more than one class in the grade), but not equally from day to day, the time devoted to each class depending on the nature of the lessons. One day the upper class in Grade A in arithmetic, for example, may have only ten minutes, and the lower class fifteen minutes, and the next day this may be reversed. What the programme requires is that the several exercises do not together exceed the time assigned to the grade. Writing, language, and drawing in all three grades are to be taught simultaneously in the same

¹ White's "School Management," pp. 86-94.

THREE-GRADE PROGRAMME.*

Closing Time	Minutes	Primary (C)	Secondary (B)	Advanced (A)
9.10	10	OPENING EXERCISES		
9.35	25	Seat Work †	Arithmetic	Arithmetic
10.00	25	Number On slate or with objects	Arithmetic	Geography
10.25	25	Number	Geography	Geography
10.45	20	Form Work Paper folding, stick laying, etc	Geography	Geography
10.55	10	RECESS		
11.15	20	Silent Reading	Geography	Grammar
11.35	20	Reading and Spelling	Form Work Map draw'g, sand molding, etc	Grammar
12.00	25	Excused from School	Reading	Grammar
		NOON INTERMISSION		
1.10	10	†	†	†
1.30	20	Form Work Clay model'g, paper cutt'g, etc	Reading	Reading
1.50	20	Silent Reading	Seat Work †	Reading
2.10	20	Reading and Spelling	Animal or Plant Study	U. S. History or Physiology
2.40	30	Writing ² or Language ³	Writing ² or Language ³	Writing ² or Language ³
2.50	10	RECESS		
3.10	20	Number On slate or with objects	Spelling	U. S. History or Physiology
3.35	25	Drawing, ² Singing, ² or Moral Instruction ²	Drawing, ² Singing, ² or Moral Instruction ²	Drawing, ² Singing, ² or Moral Instruction ²
3.50	15	Excused from School	Spelling	Spelling
4.00	10		Arithmetic	Spelling

† As may be provided for by the teacher.

NOTES: The small figures at right indicate the number of lessons a week.

United States history may be taught the first half of the session, and physiology the second half; or each branch may have two lessons a week.

On Friday the last twenty-five minutes may be devoted to instruction in hygiene, temperance, physics, natural history, etc.

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period. The inexperienced teacher may not see how this can be successfully done, but the apparent difficulty has been solved in hundreds of schools.

The most hopeful improvement of the country school lies in the adoption of a simpler grading than that of the city school, a more flexible classification, with opportunity for individual study and progress, and a workable daily programme. It needs system, but not rigidity—an elastic system adapted to its conditions and limitations. The danger is that the rural school may be sacrificed to rigid grading, as has been true in so many cities. What the country school needs is not a Procrustean system of grading and promotions, but such an organization as will permit its single-handed teacher and diverse pupils to make the best possible use of time and strength.

It is idle to talk of abandoning all attempts to improve the classification of country schools. Attempts at classification in reading and spelling are as old as the school itself, and classification in other branches has attended, if it has not made possible, most improvements that have been made. The disappointments have usually been due to unwise attempts to introduce into rural schools the rigid graded system as developed in the cities. Such attempts ignore conditions and limitations.

It seems wise to add here that the one-teacher school will not permit a perfect organization. It has necessary limitations, and, after the best possible has been done, it will still have its imperfections. It is, however, my belief that the teacher of a country school, if competent, has some advantage over the teacher of the "highly organized" city school. It is certainly possible to make the one-teacher school a most valuable agency for the elementary education of children.

REMARKS.

It seems important to call attention to the fact that the term "grade" in this paper is used in the sense of section or department, and not as synonymous with class. The term grade is applied to the three divisions of the pupils of a school, which correspond respectively to the three recognized psychical periods through which pupils pass as they advance from the kindergarten to the secondary school. It would possibly have been better if the term *section* had been used instead of grade, and, perhaps, still better if the word *group* had been employed, the term used by the subcommittee in its report. Indeed, the reader can substitute the terms *group* or *groups* for *grade* or *grades*, as the case may be, throughout the paper, without materially changing its meaning. The sense in which the term grade is used is explained in the footnote on page 538, and it is also made clear in the paper. The term applies not only to the three groups of pupils, but also to the corresponding divisions in the course of study.

The division of the course of study into three sections or groups has important practical advantages. Among these advantages are:

1. Needed freedom of classification and instruction in each section. This advantage can be fully appreciated only by those who have actually used the plan in rural schools. The fact that the subjects and disciplines in each of these sections are closely related facilitates reclassifications and sometimes a temporary union of classes.

2. A standard and an evidence of progress. The promotion of pupils from one section to the next higher is stimulating evidence of progress, and, as a result, the advancement of pupils from section to section affords a wholesome incentive throughout the entire course. The fact that pupils are known as primary, or secondary, or advanced (Group I., or Group II., or Group III.), affords both satisfaction and stimulus.

3. A needed reduction of class exercises in writing, drawing, language, and other school arts in which skill is the chief end. Reference to the programme on page 542 will show that instruction and drill in writing and language are provided for in only *one period* each day, and the same is true of drawing, singing, and moral instruction. This is not accomplished by making each of these subjects a general exercise for the entire school,

but the pupils in each section (group) have a lesson adapted to their ability and attainments, thus securing desired progress from year to year. It is found entirely feasible to teach the pupils of a rural school in each of the school arts in three sections (groups), and, what is very important, the three-section exercises can be taught *in one period*, as shown in the programme. The manner in which this is done in practice is shown in the writer's "School Management," p. 92, and the feasibility of the plan is attested by its successful use by hundreds of teachers. In teaching the several school arts, skill is the chief end, and this can only be attained by guided practice. The needed preparatory instruction in any elementary art lesson can be given within five minutes, and hence in less than fifteen minutes the pupils in three sections, beginning with the highest, can be prepared for fruitful practice; and then the remaining part of the period can be devoted to an inspection of the pupils' work in each section, the giving of needed instruction, etc. It is true that physical exercises and even singing, as usually taught, can be made a general exercise, but it would be a great gain if the pupils in the primary section, at least, were given separate instruction in music. No school art in which progress from year to year is desirable should be taught in a rural school as a *general* exercise. The three-section plan affords time for instruction and practice, and secures desired progress.

4. A workable programme, one that regulates class exercises *and seat work*. I am confident that no rural teacher who uses a section (group) programme long enough to become skillful will ever go back to a class programme with its numerous and unequal divisions of time. The regulation of the seat work of pupils is an important element in school administration.

The great desideratum of the rural school is a practical reduction in the number of daily class exercises. The three-section plan reduces the number of exercises in teaching the several school arts to a minimum, and it also facilitates a reduction in the number of exercises in arithmetic, geography, history, and other branches which require previous preparation by the pupil. The manner in which this is accomplished is pointed out in the paper. It is true that the very best that can be done in this direction still leaves the rural school with too many class exercises and, as a consequence, too little time in each for satisfactory instruction. The brevity of class exercises is, however, in part offset by the fact that the classes are *small*, and also by the further fact that the section programme permits a variation in the time given to exercises, the time depending *on the nature of the lesson*, the essential condition being that the time devoted to the classes in a given branch shall not exceed the time allotted to the section.

It seems unnecessary to guard the reader against the inference that the pupils in each of the three sections are to be taught as one class in each branch, thus giving an interval of two or more years between successive classes. This is only true of *skill exercises in art studies* — exercises that do not require previous preparation by pupils. In these art studies there may be an apparent interval of at least two years between the sections or classes, but this is not a serious difficulty in actual practice. In the other branches the pupils in a section may be subdivided into classes, with a varying interval between them. This interval need not be *common* to all the branches, as in graded schools in cities, but each branch may have its own interval, and this be unequal and varying. The interval between two successive classes in arithmetic in a section may not exceed one term, while the interval between the corresponding classes in English grammar may be a year. It is not only true that a uniform class interval of one year is incompatible with a workable classification of rural schools, but any *fixed* interval between classes results in rigidity and loss.

Nor is it desirable in a rural school to keep the classes in the several branches abreast as they advance in the course, as is the practice in graded schools. It is wholly unnecessary to keep a class in arithmetic, for example, "marking time" while the pupils are

bringing up belated work in grammar or history. In a one-teacher school there is no serious loss or inconvenience if the pupils do not maintain the same rate of progress in all the branches of the course. What is needed is a free movement forward, not only of individual pupils, but of the several classes.

There is, in my judgment, no serious difficulty in teaching the pupils in a rural school in most instances in classes. This can readily be done in all art or skill branches, and in the other branches *most* of the pupils can be classified with advantage. When a pupil can not profitably keep step with a class, he should be permitted and encouraged to work by himself. It may be that in a term or so he will reach a class in which he can recite, at least for a time; and, while he is working by himself in one branch, he may be in classes in other branches.

The rural school must make provision for individual progress, but individual study and instruction should not prevent needed classification and a regulating system. A graded course of study, with its sequence of topics and exercises, and its division into natural sections, makes a return to the unclassified condition of the old-time country school impossible, as well as undesirable.

A hint of my ideal of a one-teacher rural school is given below by means of a graphic illustration. I take a school of thirty (30) pupils, and suppose twelve of these pupils to fall in Group I. (using the terminology of the subcommittee), ten in Group II., and eight in Group III. The pupils are designated by numbers, those in the first group by the exponent 1; those in the second group by the exponent 2; and those in the third group by the exponent 3.

	Group I. (C)	Group II. (B)	Group III. (A)
Reading and Spelling	1 ¹ 2 ¹ 6 ¹ 9 ¹ 11 ¹ 3 ¹ 4 ¹ 7 ¹ 10 ¹ 12 ¹ 5 ¹ 8 ¹	13 ² 16 ² 18 ² 20 ² 14 ² 17 ² 19 ² 21 ² 15 ²	22 ³ 25 ³ 28 ³ 23 ³ 26 ³ 29 ³ 24 ³ 27 ³ 30 ³
Arithmetic Oral in Group I.	1 ¹ 2 ¹ 7 ¹ 8 ¹ 3 ¹ 4 ¹ 9 ¹ 10 ¹ 5 ¹ 6 ¹ 11 ¹	12 ¹ 13 ² 19 ² 14 ² 15 ² 18 ² 20 ² 21 ² 16 ² 17 ² 22 ² 23 ³	24 ³ 30 ³ 25 ³ 27 ³ 28 ³ 29 ³ 26 ³
Geography..... Oral in Group I.	1 ¹ 4 ¹ 8 ¹ 11 ¹ 2 ¹ 5 ¹ 7 ¹ 9 ¹ 12 ¹ 3 ¹ 6 ¹ 10 ¹	13 ² 16 ² 18 ² 21 ² 14 ² 17 ² 19 ² 22 ² 15 ² 20 ²	23 ³ 26 ³ 24 ³ 27 ³ 28 ³ 29 ³ 30 ³ 25 ³
English Grammar.	For synthetic language exercises, see below		23 ³ 26 ³ 28 ³ 24 ³ 29 ³ 25 ³ 27 ³ 30 ³
History and Physiology			22 ³ 28 ³ 24 ³ 26 ³ 29 ³ 25 ³ 27 ³ 30 ³
Writing and Language	1 ¹ 5 ¹ 9 ¹ 2 ¹ 6 ¹ 10 ¹ 3 ¹ 7 ¹ 11 ¹ 4 ¹ 8 ¹ 12 ¹	13 ² 16 ² 19 ² 14 ² 17 ² 20 ² 15 ² 18 ² 21 ² 22 ²	23 ³ 27 ³ 24 ³ 28 ³ 25 ³ 29 ³ 26 ³ 30 ³
Drawing, Singing, etc.....	1 ¹ 5 ¹ 9 ¹ 2 ¹ 6 ¹ 10 ¹ 3 ¹ 7 ¹ 11 ¹ 4 ¹ 8 ¹ 12 ¹	13 ² 17 ² 14 ² 18 ² 21 ² 15 ² 19 ² 22 ² 16 ² 20 ²	23 ³ 27 ³ 24 ³ 28 ³ 25 ³ 29 ³ 26 ³ 30 ³

Supposing the pupils to have a lesson daily in each branch or group of branches (as indicated), the above scheme gives only fifteen daily class exercises, not including those in Group I. in reading and spelling, number, and geography. Weekly exercises are not

represented. It is possible for a teacher to do good work with this number of exercises with small classes. The largest amount of individual work is found in Group III. In practice there would doubtless be more irregularities in classification than can well be shown in the illustration.

Columbus, O.

EMERSON E. WHITE.

COURSE OF INSTRUCTION FOR RURAL SCHOOLS.

Prepared in accordance with the directions of the Committee of Twelve at its meeting in Chicago, November 18, 1896.

SUGGESTIONS.

[This course of study is arranged in four groups, partly with the thought that whenever the schools of a township are gathered at one or more central points the first two may constitute the basis of work for the lower, and the last two for the higher room. Whether the three-group system explained by Dr. White be used, or the four-group, as indicated in this course, must depend very largely upon the size and advancement of the school. The principles are the same in either case.—HENRY SABIN.]

"The course of study is the measuring rod or scale which is used to determine at what point in the eight years' work in the elementary course a pupil's work has arrived. It should not be used as the Procrustean bed on which to stretch the work of the school in order to give uniformity." (Report of Subcommittee on Instruction and Discipline.)

It is the aim in this course of instruction to present the most essential topics in orderly sequence, without any prescription of methods of teaching. It can be begun at any age from five to seven; it can be continued, often with profit, to a later age than is here stated. It is believed that this course offers every facility for combinations of classes, for transfers of pupils, and for any system of alternation.

This course recognizes the essential elements entering into accepted courses of instruction. Each of the four groups comprises about two years' work. In these groups there will be divisions into sections—as (a), (b)—only when absolutely necessary. Experience has shown that, within the age limits of the several groups, the work as laid down can be done. Whenever a pupil is able to do the work of the succeeding group he should pass to it. In small schools there will be much individual instruction, and in these will seldom be found pupils representing all these grades of work. In large schools, with one teacher, a skillful teacher can to a considerable extent secure assistance from the more advanced pupils in certain work with the younger, to the mutual advantage of teacher and taught, as well as to the school as a whole. This has been done in this country, and is done throughout England today under the pupil-teacher system.

Whenever several schools working on such a course are consolidated so as to employ two teachers, if one teacher take Groups I. and II., and the other Groups III. and IV., the school is at once graded into a primary and a grammar school, and the next step in gradation will give one group to each teacher. In this gradation the work of each group will be expanded as circumstances allow. If, in the course as here laid down, a line of work—as elements of science—must be omitted, the time can be added to other subjects; if in some subjects—as elements of science and morals—but few lessons can be given, even these lessons, carefully prepared and well taught, will tend to make the teacher a better teacher, the pupil a more thoughtful pupil, and to raise the standard of the school.

To carry out such a plan of work as is here outlined, the pupil as he advances must do more and more for himself under the guidance of the teacher, very much to the advantage of the pupil. Thus, in arithmetic, there is provision for but two formal recitations per week in Group III.; for but one in Group IV. For the rest the pupil learns to do by doing.

The studies are grouped, each group comprising about two years' work (see pp. 548-59).

There is here given a scheme for distribution of time, the numbers representing the lessons per week:

	I.	II.	III.	IV.
Reading, - -	8	8=16	3	2=5
Language, - -	4	4=8	4	4=8
Arithmetic, - -	8	8=16	2	1=3
Writing, - - -	4	4=8	2	0=2
Drawing, - -	3	3=6	2	2=4
History and Geography, 4	4=8	4=8	4	4=8
Morals, - - -	1	1=2	1	1=2
Elements of Science, - 1	1=2	2	3=5	

Totals in I. and II., - - 66 Totals in III. and IV., 37

Giving to lessons in I. and II. an average of ten minutes each, and to those in III. and IV. an average of twenty minutes each, the total time will be 1,400 minutes for the week. If the daily session be six hours, and one hour per day be given to recesses and general school business, there remains a surplus of 100 minutes per week at the disposal of the teacher, which can be devoted to more instruction wherever needed.

This table is given merely as suggestive of possibilities, and not by any means as an ideal adjustment of ratios. In many schools much more time can justly be given to subjects here left with but little.

In all the work of this course it must be borne in mind that in the average rural school the complete course will never be in working at one time; that there must be much individual instruction; that in every good rural school there must be very much encouragement of the pupil to work by himself under the general guidance and direction of the teacher.

REMARKS ON DRAWING.

Object of the Course.—To develop correct notions of form as it appears and to represent these notions truthfully by drawing, and to cultivate appreciation of beauty of form.

Materials.—Geometrical solids large enough to be seen from any part of the room. These can be found in common objects or made from stiff paper or cardboard and tablets showing geometrical figures. A prism for teaching color; sticks one to five inches long for laying forms; paper for cutting and folding; good drawing pencils, soft and medium in hardness; drawing paper with surface to take pencil well; a good blackboard, and clear, soft crayons, with a few colored crayons; some colored pencils for pupils' use; water colors; some charcoal for more advanced work; an ample supply of common objects, leaves, flowers, fruits, etc., renewed from day to day from the neighborhood.

The statements of this course are necessarily brief and general; it is supposed that teachers will be aided in matters of detail by some of the published courses in drawing.

In teaching drawing as a truthful representation of the visual appearance of form there is not necessarily the strict sequence in the use of geometric models which there would be in a course of form lessons. For lessons in representation of the facts of forms as a basis for construction in connection with working drawings, see Group IV.

Some prefer in the early stages to drill only on planes and lines, postponing solids to a later period. In the French course in drawing the solid does not appear before our Group III., and then at first the drawing is a carefully graded course from low relief.

Those who prefer to work at first entirely from nature can select in order such exercises as are in accordance with this theory and mass the technique in the later stages of the course.

(Continued on p. 560.)

GROUP I. (5-7 years.)**GROUP II. (7-9 years.)****Reading.**

(a) First exercises in reading ; from blackboard and chart ; Primer and First Reader ; and appropriate literature.

(a) Second Reader and literature of similar grade. Fables and folk stories, etc.

(b) First and Second Readers, and other reading of similar grade.

(b) Third Reader or books of similar grade. Literature as supplementary readings.

Children should be taught carefully such selections as will awaken interest and lead to a desire to read for themselves. In all grades children should memorize choice selections appropriate to their age.

(See general directions in I.)

Spelling.

Taught chiefly in connection with reading Oral and written.

Taught chiefly in connection with reading and other studies of group. Chiefly written.

Writing.

In this section the child should learn to write legibly and neatly, and should form the habit of writing with correct position of paper, body, and hand. Use the pen early.

Use simplest forms of letters; train to uniformity in spacing between letters and words, and in size and height of letters; in short, in all the qualities which constitute a neat and legible written page. Insist upon careful penmanship in all written work.

GROUP III. (9-11 years.)

Fourth Reader at discretion of teacher for drill; the reading should be largely of literature, as supplementary reading.

The drill should be mainly in the reader, and the choice of literature as supplementary reading should be such as the pupil can read with such ease as to give pleasure and thus develop a desire to read good literature.

Take great care to cultivate a taste for good reading. Train pupils in proper use of the library.

GROUP IV. (11-13 years.)

The reading of good literature, as much as can be carefully read. Memorizing of choice selections should receive careful attention. Encourage home reading. III. and IV. should constitute one class each, and the reading-lesson drill need not be a daily exercise. From the first give careful attention to the cultivation of the speaking voice.

Reading.

Words to be selected chiefly from reading and other studies of group. Chiefly written.

Words to be selected from studies of group, or spelling-book. To be taught chiefly in connection with written work.

Spelling.

See Group II. Much practice to give ease and rapidity, never sacrificing legibility and neatness. Much writing, to form the habit of easily expressing thought with the pen.

See Group III. Writing in this group should be chiefly in composition, in written lessons, and reviews, in practice in business forms, and in correspondence.

Writing.

GROUP I. (5-7 years.)

Language.

(a) Conversational lessons on familiar experiences and familiar things. Reproduction of stories told by the teacher; invention of stories suggested by pictures, etc. All this will be training in observation and thinking as well as in expression. Great care is necessary as to choice of words and tones of voice.

(b) Similar to (a), adding written to oral expression; instruction in correctness of the written forms, as the form of the sentences, the use of capitals and punctuation. Memorizing of choice selections.

GROUP II. (7-9 years.)

(a) See (b), Group I. Combination of oral and written work. Seek variety in subjects. Base lessons on nature lessons, readings, etc. Careful attention to form and use of complete sentences in recitation and conversation, to purity of tone, clearness of enunciation, correctness of pronunciation in speaking, to legibility and neatness in writing.

(b) Work of previous years continued and expanded; oral narration, invention (from pictures, etc.), description, with written sentences from the same; letter writing, with special attention to the general form of the letter; careful attention to the vocabulary of the child. Memorizing of choice selections.

In much of this work all the group can be taught as one class, but pupils of very unequal advancement should not be classee together.

History.

Short stories, such as will interest the child, drawn from biography, history, and travels. Explanation of historical pictures.

The teacher must have at hand appropriate books for the readings by herself or by the pupils, hence the necessity for a school library.

See Group I. Conversations on current events within the knowledge or easy comprehension of the child. Conversations, stories, and readings on the lives of eminent historical characters, and on the memorable in historical events, such as can be easily imagined and comprehended by the child. National manners and customs and modes of life, such as can be fully illustrated. All this instruction must be made clear and interesting by stories, descriptions, and illustration.

GROUP III. (9-11 years.)

See Group II. Much written work in connection with and based upon the school work in its various departments. The sentence and its parts; general classification of words into parts of speech according to their use in the sentence, not teaching definitions nor treating of subdivisions. Careful teaching of the construction of the paragraph. Letter writing, with special reference to correct forms of social and business letters. Readings in literature by teacher and by pupil in school and home. Memorizing of choice selections long enough to have unity in themselves.

Some text-book of language lessons must be used in the rural schools, in order that a course of teaching may be carried out effectively.

See Group II. Extension of course of Group II., with wider range, and with more and more readings by the pupil.

Special attention to biography, with oral and written reproduction.

Readings in United States history. See IV.

In III. and IV. the course is by readings or text-book study by the pupil.

GROUP IV. (11-13 years.)

(a) Letter writing, with special reference to subject-matter, to form and expression.

Much writing in connection with school work, and from outlines wrought out by teacher and pupils. Throughout the course careful attention should be paid to the correction and enlargement of the pupil's vocabulary.

(b) A course in grammar by rational use of a text-book. Preparation of plans for themes by the pupil, and writing from them.

(c) Readings in literature by pupils in school and home. Memorizing of choice selections long enough to have unity in themselves.

All written lessons and examinations should be so planned that they will be lessons in composition as well.

By this course of instruction the pupil should now be able to express his own thoughts clearly, in correct form, and in well-chosen words.

(a) Selected epochs of general history, with study of leading historical characters; a course of readings and of conversations. Main object to develop a love for historical reading.

(b) A course of study in United States history.

Language.

History.

GROUP I. (5-7 years.)**Geography.**

Familiar conversations and simple preparatory exercises, serving to excite a spirit of observation in the child by leading him to observe the most common phenomena of earth and sky. Lessons on relative positions of objects, and distances.

Points of compass learned from position of the sun, and applied. Oral lessons to teach terms of geographical description from the child's own observation. Modeling in sand. Stories of travel. Object lessons on products, domestic and foreign.

These lessons in I. and II. are of necessity mainly oral until the pupil can read fairly well; then geographical readers and primary geographies will give much assistance.

Arithmetic.

(a) Instruction at first entirely objective; objects gradually discarded as the facts are learned. Numbers and the combinations which form them up to 9. Throughout the course the child must learn through his own perceptions and self-activity.

(b) Combinations represented by the digits in pairs up to 9 and 9. The fundamental operations or computations taught, so far as possible, while teaching the combinations; thus $3 + 1 = 4$, $2 + 2 = 4$; 3 and 1 are how many? (addition); 3 and how many are 4? (subtraction); two 2's are how many? (multiplication); how many 2's in 4? (division); etc. Fractions $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$. Grouping by tens, to give the fundamental idea of the decimal system. (The course in combinations (a) and (b) follows the grouping of the decimal system.) Reading and writing of numbers to 100. Constant application to concrete problems.

Number lessons in Group I. are mainly oral.

Simple problems involving addition, subtraction, multiplication, and division, using numbers of not more than three places.

GROUP II. (7-9 years.)

See Group I.

Home geography: Observations of phenomena of earth and sky; of the seasons; of contour, surface, mountain, valley, plain, brook, river, pond, soils, vegetation; in short, of whatever elements of geographical study can be brought under the observation of the child, that his knowledge of his environment may serve as a basis for his future studies of the world.

Modeling in sand. Notion of map. Extension of study to immediately related regions. Notion of form of the earth; the globe. Illustrated lessons on races of men, and on the picturesque and curious in their customs and manner of life.

See Group I. (a) Reading and writing three and four place numbers. All the fundamental operations with numbers to 1,000. Values and relations of coins in United States money. Exercises with fractions $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{16}$. Many concrete problems with much objective illustration. Establish connection between arithmetic and the experiences and businesses of farm life by simple, interesting, varied problems. Treat one difficulty at a time.

(b) Writing decimals to one, two, three places; addition and subtraction of the same. Common fractions with one digit for denominator. The units of measures and weights objectively taught; simple exercises involving compound numbers. Rapid calculations with small numbers and easy problems. Objects for counting and combinations in the first steps, and weights and measures illustrating all the tables taught, are necessary. The child should weigh and measure for himself before he is questioned in relative values.

GROUP III. (9-11 years.)

See Group II. Continents and great land and water masses. North America and United States, with incidental treatment of other parts of the world, in connection with history and with current events.

In all the study of geography note its correlations with other subjects, especially with history, literature, language.

GROUP IV. (11-13 years.)

(a) See Group III. Study of foreign countries, apportioning the time devoted to them according to their relative interest and importance.

(b) Work of this group to be divided if necessary.

The use of modeling, map drawing, and the various means of illustration is presupposed throughout the course in geography, and also the treatment of physical, mathematical, industrial, and commercial geography, in due order and degree. As the subject will usually be taught in the rural school with the aid of text-books in which these topics are developed, it is deemed unnecessary to enter into details in this statement.

(a) See Group II. Compound numbers and common fractions, simply treated.

(b) Decimal fractions and percentage, with common business applications in easy problems.

(a) See Group III. Percentage **Arithmetic.** with applications to business.

(b) Ratio and proportion; simple treatment of square and cube root.

Simple geometrical facts and constructions, with mensuration of plane figures. Business forms and simple bookkeeping.

Throughout the course mental arithmetic should receive careful attention.

Drawing.**GROUP I. (5-7 years.)**

Drawing very simple familiar and nature-forms of beauty and interest. It is well, also, for the child to represent simple colored objects, as apple, lemon, orange, and natural objects at hand, according to the season, in solid color, as he sees them.

Illustrative drawing, by the children, may be frequently introduced as a means of interest; in all these exercises great freedom should be allowed.

Free paper cutting, as exercise in memory of proportions, may be an occasional exercise.

Practice on lines of various kinds as combined in symmetrical and pleasing figures, so conducted as constantly to exercise the invention and taste of the child.

Symmetrical arrangement of forms (tablets, seeds, etc.), by repetition in a line (borders) and around a center (rosettes); by selecting objects of different colors this may be made an exercise in color as well as form; occasional use of ruler in drawing lines and figures.

Color. — The spectrum colors, from the prism, should be taught, and colors in flowers and other objects should be carefully observed.

GROUP II. (7-9 years.)

During this period of two years, from large models, mainly by the visual appearance and not as form studies in the usual sense of that term, study the sphere, cube, cylinder; spheroid, prolate and oblate; square and triangular prism; pyramid, cone, ovoid; comparing with each other and with objects related to them, noting resemblances and differences.

(Some exercise in drawing these, using soft pencil — black, brown, or blue — and shading a little, avoiding pure outline in picturing solids. This work can be postponed to the next group.)

Paper cutting to the line of drawings and construction may be used as elementary manual training.

Draw circle, ellipse, oval, and other good forms with curved outline; draw leaves, fruits, nuts, and familiar objects of beauty and interest; drill on division of lines, bisection, trisection, quadrisection; judgment of length of lines; proportions of lines one to another; proportions of figures; accurate measurement of lines and distances; drawing and estimation of angles of various kinds; cultivate neatness and accuracy in work; symmetrical arrangements of tablets and other forms, as borders, rosettes, and other ornaments, and drawing the same; a part of each lesson should be given to free-arm movements and to exercises in drawing adapted to give freedom and accuracy in drawing outlines, right-lined or curved.

Exercise in picturing in color, with water color, or colored crayon, the various natural objects studied in this group.

Illustrative drawing.

Color. — Spectrum colors, hues, tints, and shades.

GROUP III. (9-11 years.)

Free-hand drawing of plane figures, right-lined or curved in outline; pictures of geometric solids and of natural and artificial objects, choosing objects good in proportion and outline; interest will be increased by drawing groups of objects. Once a week draw from geometric solids and simple objects in light and shade, drawing the shadows very simply. In autumn and spring, especially, study plant growth, and draw sprays of leaves and flowers; draw vegetables and fruits; construction of forms of regular solids by drawing, with instruments, cutting, folding, and pasting paper and cardboard; studies in design from natural plant forms, using colored crayon or water color if possible. Neatness and accuracy required in all work.

Drill as in II. in free-arm movements and in exercises in drawing, practicing especially on circles, spirals, ellipses, ovals, reversed curves; judgment of proportions of lines and figures.

Commence collection and study of pictures.

Color.—Mixing colors; harmony of colors.

GROUP IV. (11-13 years.)**Drawing.**

(a) Draw pictures of geometric solids and of natural and artificial objects in groups, choosing objects good in proportion and outline, giving special attention to arrangement of groups.

(b) Study foreshortening of horizontal and vertical surfaces; draw pictures of rectangular solids in different positions relative to the eye, singly and in groups; draw books, foliage, vases, etc.; draw in light and shade with simple background, using charcoal, pencil, or brush, and paper of size suited to the object; large paper, nine by twelve inches, is desirable for much of this work.

(a b) Exercises in drawing shapes of faces of objects—top and front—and working drawings with figured dimension lines, with drawing instruments, using pencil, or pen and ink. (Some of this work may be done in Group III.)

Free-hand drill on curves, shade (or tint) lines, and judgment of proportions; drawing of original designs, using color; practice in use of drawing instruments; graphic solution of simple problems in geometry.

Color.—See Group III. Add complementary colors. Study color in vegetables, flowers, leaves, etc.

NOTE.—In drawing, as in the other subjects of this course, the aim has been to construct a course which will be helpful to teachers in the average rural school under fairly favorable conditions. The order of treatment of subjects in each group, and the amount of work done, must depend upon the conditions; in some cases more can be done than is here laid down, in many cases not so much. So far as the child learns to see clearly and to draw truthfully and well what he sees, and as he sees it, good work has been done. He should be encouraged to draw much, aside from his lessons and school exercises, from whatever is of interest to him.

(See Remarks on Drawing on pp. 547 and 560.)

**Elements of
Science, or
Nature
Study.****GROUP I. (5-7 years.)**

In the work in nature study only so much should be attempted as can be well done.

The course in science furnishes an excellent basis for written work.

Simple object lessons, if possible with the object under the eye and in the hand of the pupil; conversational lessons on familiar things and on the phenomena of nature, designed to lead him to give attention, to observe, to compare, to question, to remember. Familiar talks on the human body and the care of it; on common animals known to the child, their distinguishing characteristics and habits; on common flowers and plants, especially food plants and plants of use in the arts, as corn, cotton, etc.; on stones and metals in common use which the child can learn to recognize. As early as possible he should have some care of plants in the schoolhouse or the school garden.

Correlations, especially with language and drawing, with geography and literature, should be kept in mind.

In nature study the development of appreciation of and love for the beautiful should be made prominent.

GROUP II. (7-9 years.)

See Group I. A graduated course of nature study following a systematic order of development, but observing the child's standpoint as determined by his experience and interests, studying things, phenomena, processes, properties, and classification of things, as animal, vegetable, mineral. Conversational lessons on the human body, its principal parts, their movements and their uses; on common animals, so conducted as to arouse interest in animal and bird life, especially treating of the uses of birds to the farmer, and the necessity for their protection, to stimulate observation regarding their habits, and to cultivate a sentiment of kindness in the treatment of them; on plants and the care of them, their parts, as roots, stems, flowers, fruits, seeds, and their growth; on some common minerals and their uses. Lessons on transformations of material in manufactured articles of common use.

GROUP III. (9-11 years.)

Preceding course so expanded and taught as to give clearly some of the more important notions of natural science: the human body and the principal functions of life; distinguishing characteristics of animals taught from the study of types; useful and noxious animals, especially birds and insects; the study, in typical specimens, of the principal organs of the plant; plant growth, its order and conditions; some typical trees, and their characteristics, value and uses of their wood; fruit trees best adapted to the region; lessons on soils.

Every rural school should have a plot of ground prepared as a school garden, in which every pupil may cultivate and study plants. In this case the instruction in Groups III. and IV. would be extended to include the preparation of soils for cultivation, the action of fertilizers, the simpler agricultural operations, and the use of garden tools.

GROUP IV. (11-13 years.)

Revision and extension of the course in Group III., giving more of completeness and of scientific arrangement and form to the instruction. Cabinets should be collected for the school.

Physiology. General review by use of a text-book, giving special attention to hygiene and to the effects of stimulants and narcotics. Sanitation of school and home.

Zoology. Observation of the habits of animals throughout the year; study of available types; general classifications; geographical distribution.

Botany. Essential parts of the plant; order and conditions of growth; principal groups; geographical distribution of plants; uses of plants; study of trees.

Mineralogy. General treatment of the structure of the crust of the earth; soils, rocks, fossils, with illustrations from the neighborhood.

Excursions and collections by the pupil.

Physics and Chemistry. The elementary facts and principles of these sciences should be taught by simple experiments. The course will vary according to the qualifications of the teacher and the means of instruction. Various courses for this instruction have been prepared, giving methods in detail.

Only such selections from the above as can be well done.

**Elements of
Science, or
Nature
Study.**

GROUP I. (5-7 years.)**Morals and
Civics.**

Conversations with the children in all the school exercises, in which the teacher shall aim to secure the confidence and familiar participation of the children, and thus to learn their characters so as to guide their tendencies of thought and action. Special care regarding children in whom the teacher notices any moral defect or vicious tendency. Careful attention to propriety of conduct and good manners.

GROUP II. (7-9 years.)

Familiar conversations and kind individual counsel when needed. Simple stories, parables, fables, treated with reference to ideas of right and wrong. (Never make a class lesson from cases involving the conduct of the pupil; these should be treated by private admonition.) Practical exercises tending to arouse the moral sense of the class, by methods of school discipline, by often making the pupil the judge of his own conduct, by training the pupil to draw the appropriate lessons from facts observed by himself.

GROUP III. (9-11 years.)

Continue course of Group II., with somewhat more of method. Conversations so conducted as to interest the pupil and induce the freest participation. Passages from history and literature treated from the point of view of right and wrong. All lessons and readings so arranged as to omit no important point of the following course: duties to parents, duties to brothers and sisters, duties toward employers, duties toward servants and employes, duties of the child in school, duties toward the native land and society, duties toward one's self, as cleanliness, temperance, economy, self-respect, modesty, the Golden Rule; duties toward God, not a course of religious instruction, but emphasizing especially two points: cultivating the feeling and habit of reverence, and a disposition of obedience to the laws of God.

Throughout the whole course kindness to animals should be most carefully taught.

Some work in civics should be taken up in III. as well as IV.

GROUP IV. (11-13 years.)

Instruction along the lines of the preceding course, expanding the instruction especially in regard to social morality and duties to the native land, treating under this last title the organization and principles of our form of government (civics).

As a preparation the teacher should carefully read some systematic treatises on ethics and civics, and the immediate test of success will be the fact that the pupils are heartily interested in the subject.

Morals and civics furnish an excellent basis for training in speaking and writing.

This course in morals, in its general classification and arrangement of topics, is in accordance with the course of moral instruction in the schools of France, and has been tested for several years in a training school in this country.

**Morals and
Civics.**

REMARKS ON DRAWING — (*continued from p. 547.*)

Historic ornament is left to the discretion of the teacher, as in most cases limitations of time would exclude it from the rural school. Teachers should themselves gain such knowledge of historic ornament and of the history of art as is possible. Excellent books treating of these subjects can be easily obtained, and the knowledge thus gained will enable them to add much of interest and value to their instruction.

For the complete treatment of this course it is desirable that the teacher should have had some special preparation for teaching drawing. In the rural school selections will often have to be made according to circumstances and the ability of the teacher. There should be at least three lessons a week, of twenty minutes each, in Groups I. and II., and longer lessons in Groups III. and IV. Exercises included in parentheses are left to the discretion of the teacher.

In all parts of the course in drawing care should be taken to cultivate an appreciation of the simple elements of beauty, and to develop a love for the beauties of nature and art; and the schoolroom should be furnished with some classic examples of art for study as well as for ornament. In this regard note the analogy between the study of art and the study of literature.

APPENDIX J.

NEGRO TEACHERS FOR NEGRO SCHOOLS.

The answer to the question, "Should white teachers be employed in negro schools?" requires some knowledge of the past conditions of the negro, as well as an intelligent and sympathetic appreciation of his present status. I propose then to consider the question in the light of certain broad, fundamental principles which involve, essentially, the welfare and progress of the negro race.

Thirty years have passed since the emancipation of the negro became an accomplished fact. For thirty years he has been the subject of much contention and the object of much solicitude. During this period new nations have been born to civilization. Japan, for instance, whose birth was almost coincident with negro emancipation, has established herself "Queen of the Orient," and has demonstrated her right to a place of honor among the great nations of the earth. While much progress has been made by the negro race in the South, it must be admitted that this progress has been due too little to himself, and too largely to the external influences of the civilization under which he has lived. While marvelous development may be found in individual instances, the condition of the masses of the race is but little improved; the solution of the vexed negro question is as problematical as ever; the education of the race is still in an empirical stage. Unlike other races that have attained to civilization, the negro, with a few individual exceptions, has been content to be merely a passive spectator of the processes that have affected him. Incapable of initiative and executive power, and wanting in genius for organization, he has never been an active agent in the work of race redemption. He has never been accustomed to voluntary activity; he is here not of his own choice; a docile slave, he wrought on southern plantations until, without an effort of his own, he was made an American citizen. Having received his political elevation by legislation, he naturally expected to obtain a commercial, intellectual, and moral status in some such mysterious way. The progress of the negro race, remarkable though it may be, is not the result of social and political self-evolution, but an effect produced by extraneous causes.

If the education of the negro is to be anything more than a veneer, the race must obey that great law of human development which makes voluntary energy the source of power and progress. The intellectual power developed must be energized by proper incen-

tives into self-activity; it must be made reproductive within the race itself. It is not enough that the race shall be environed with all the accessories of civilization. Its consciousness must be aroused, its powers energized, its sense of responsibility quickened. It must be taught to work out its own salvation, if its progress is to be real and enduring. The gospel must be preached by its own preachers; its schools must be taught by its own teachers. It must consciously realize its own responsibility for the effective use of the means at its command in the work of race development.

The position of the negro as a race has heretofore been one of dependence. Lacking the virtues of thrift, foresight, and economy, he is still very largely supplied from the white man's table; and in time of trouble, confidently appeals, and seldom in vain, to his former master for aid and relief. The negro wears his master's religion, and sometimes his politics, very much as he does his old clothes, as something entirely foreign and external to himself. By perpetuating this dependence, intellectual and moral, we acquiesce in a species of spiritual bondage that is almost as unfavorable to race progress as slavery itself. "Our real friends," says Emerson, "are those who make us do what we can." Judicious aid to a dependent people is necessary and praiseworthy, but, in my judgment, it should stop short of doing all their intellectual work for them.

To cultivate in the negro the sense of intellectual and moral independence, such avenues of service as will enable him to effect the uplifting of the race should not be closed against him. He requires these as worthy incentives to arouse his ambition and to stimulate his sense of responsibility. To be the teacher of his race is the one position of honor, dignity, and responsibility to which he may legitimately aspire. To throttle his energies and to close against him this avenue of activity and usefulness would be an unwarranted assumption of responsibility by the white race and an injustice to the negro.

But a further and more potent reason for employing negro teachers to teach negro schools is the fact that race identity is an important factor in educational work. The teacher and the taught must possess a common consciousness, a mutual affinity, as a condition of proper intellectual and moral growth. The teacher must embody in his personality the historic race epochs and processes of development represented in the pupil, in order that the intellectual powers of the child may be invested with that atmosphere of sympathy and appreciation necessary to their healthy activity. The historic consciousness of teacher and pupil must possess certain intuitive elements in common, as the result of common race processes, if the teaching is to be efficient and the development natural.

Again, it is a fact that cannot well be called in question that white teachers in negro schools can never realize, even approximately, the ideal relation that should exist between teacher and pupil. This is forcibly true in elementary schools. That relation requires love, not philanthropy; affection, not charity; sympathy, not pity. Occupying planes so widely separated, spheres of activity so diverse; without common blood or social ties, common history or common interests, common origin or common destiny, a white teacher and a negro class will never realize the ideal school. In such a case the teacher cannot appeal to the inner life of the pupil, and the craving consciousness of the child finds no responsive chord in the teacher. They must meet, if they meet at all, upon the cold, abstract plane of reason. The instinct of race identity, as strong in one race as in the other, as strong in the pupil as in the teacher, intervenes as an insuperable barrier. Between teacher and pupil must ever remain this chasm of race difference, as deep as human consciousness itself. Call it prejudice if you will, but it exists as a God-implemented instinct of which the teacher can never divest himself—out of which the pupil can never be educated. Although it be tempered by philanthropy, sweetened by religion, or even smothered by fanaticism, it still exists, and will continue to exist as long as humanity.

The principles here emphasized are not restricted in their application to the negro race; like all natural laws they are universal, and are modified in their operation only by the variation of the conditions involved. They are true in their application to the American Indian and to the Mongolian, to the Fiji Islanders and to the Kaffirs of South Africa

Experience in the missionary field has demonstrated the fact that the successful propagation of the gospel requires the preparation of native teachers and native preachers as a primary condition. The foreign missionary may direct and supervise, aid and inspire, but he remains a foreigner still—a being apart and something different from the people. The native teachers and preachers of our missionary fields are the hope of heathendom, because they alone can fulfill the requirements of the law of race identity.

Nor is this principle confined to race relations; in a lesser degree it operates between different families of the Caucasian race, and indeed between any two people differing in nationality and language. School men of wide experience will testify to the fact that few teachers of English or American birth can successfully manage a school of Irish, German, or Swedish children; on the other hand, a native French or German teacher, be he ever so proficient in scholarship, or fertile in resources, finds much difficulty in the discipline of American children, and years of striving are usually required to bridge the chasm of difference.

In elementary and secondary education I regard this law of race identity as vital and imperative, but in the province of higher education its authority, under certain conditions, may possibly be relaxed without serious consequences. Institute instruction, however, and the guidance and supervision of negro teachers by the whites must still be continued as a matter of duty and as an administrative necessity.

The important principle involved here is primarily that of co-ordination—not of textbooks and curricula—but the vital co-ordination of the teacher with the child. When we impose upon the child a relation so incongruous, physically, intellectually, and morally, we violate a primary law of nature as well as an established pedagogical principle. The fact that the vast majority of negro teachers are deplorably incompetent no one will deny. But the remedy is to be sought in the improvement of these teachers, and not in the substitution of white teachers. Novel as the statement may appear, I confidently hold that no white teacher is competent to teach negro children. We must remember that for the teacher there are conditions and qualifications antecedent to scholarship, and tests more important than the uniform state examination.

Other considerations in the same line might be adduced, such as the necessity for modifying our courses of study and adapting our methods of teaching to the wants of negro schools. It remains to be seen whether the instruction of an infant race can proceed along the same lines and by the same methods as that of a race whose culture is based upon centuries of struggle and self-effort, without involving the violation of all sound economic and pedagogic doctrine. But the consideration of these lines would carry me beyond the limits and the object of this discussion.

In conclusion, let me briefly summarize the argument for employing negro teachers in negro schools:

1. The educational development of the negro must be from within, and by the race itself, and not solely through extraneous agencies.
2. The intellectual and moral dependence of the race should not be perpetuated. The negro needs to be stimulated to independent activity.
3. As a teacher of his race the negro occupies a position of trust and honor, which he needs to quicken his sense of responsibility, and to furnish him the incentives and the means for race elevation.
4. The teacher and the pupil must possess a common consciousness, whose historic processes have common elements, resulting in common intuitions. The teacher must embody in his character the race epochs and processes represented in the child.
5. The instinct of race identity renders impossible the realization of an ideal relation between the white teacher and the negro pupil. The teacher and the child must be co-ordinated.

APPENDIX K.

J. W. BRADBURY.

Hon. J. W. Bradbury, United States Senator from Maine 1847-53, was a teacher for ten years, commencing at the age of seventeen. He had among his pupils Hawthorne, Longfellow, Abbott, Cheever, Cilley.

He had completed his studies for admission to the bar in 1829, but it would be some months before the court could make provision for his examination.

He had learned in visiting schools that teachers were ignorant of proper methods of instruction, and, hoping to assist them to some definite ideas of what studies should be taught in the common school, the order in which they should be taken, and the methods which should be used in teaching them, he gave notice in August, 1829, that a training school for teachers would be opened in Effingham, N. H. The school was in session during September, October, and November. About sixty teachers were in attendance. Instruction was given in the subjects taught in the public schools and in the methods that should be used in teaching them, and the ability of his pupils to comprehend the instruction in methods was tested by *requiring them to teach the subject to the class under his criticism.*

At this time he had not heard of the existence of such a training school in this country.

In the winter of 1829-30 Mr. Bradbury was a member of the school committee of Parsonsfield, Me. The methods which he had taught in his Effingham training school were adopted in Parsonsfield. By improved methods of examination of teachers better teachers were secured, the quantity and quality of work done in school were raised, and the schools of Parsonsfield were placed on a higher plane. It is some evidence of the character of this movement that more than 600 women have gone out from this small country town and become good teachers.

TEACHERS' SEMINARY AT PLYMOUTH, N. H.

[Extracts from catalogue, 1839, in which year the school was closed from failure in appropriation.]

"This seminary has been founded with the hope of improving popular education, by elevating the character of teachers. . . . The trustees have three prominent objects in view : (1) to educate teachers for common and other schools ; (2) to fit students for college ; (3) to furnish the means for a thorough English education. . . .

"The school embraces a department for males and one for females. . . . The course of study in the Teachers' Seminary requires four years in the male department and three in the female department, with the exception of one term each year, during which the members may be absent to teach school."

In the course of study were taken English language, history of the United States and of England, physics and chemistry, with experimental lectures ; mathematics, including trigonometry and conic sections ; political economy, intellectual and moral philosophy, logic, natural theology, lectures on the history of education and the art of teaching, in addition to the common school studies.

Studies were suspended in the winter terms of the last three years of the course in the male department to allow students to teach, and in the summer terms of the same years in the female department for the same purpose.

Although the students in the classical department far outnumbered those in the teachers' department—eighty-seven to twenty-eight—yet all the statements show that the teachers' department was the leading one in the interest of the principal, and scholarships, of which there were several, were founded only in this department.

APPENDIX L.

NEW YORK STATE SCHOOL LIBRARY.

The New York legislature of 1895, in an act entitled "An Act for the Encouragement of Common Schools and Public Libraries," authorized the state superintendent of public instruction to establish a state school library for the benefit and free use of the teachers of the state. . . . The books selected embrace those bearing directly on the profession of teaching, with others relating to studies in psychology and the training of children, together with those referring to special studies in school. Particular attention has been given to the selection of works on civil government, political economy, and social and moral questions, as discussed by teachers with the children. Volumes on the natural sciences have been provided for popular use rather than for technical or professional reading. Care has been taken to provide, to a limited extent, books relating to history, general literature, and art.

Any teacher may have the use of the books of this library free of expense, except for postage and express, and he may purchase books from the list at a fixed price. (From Report of State Superintendent of Public Instruction, New York, 1896.)

LIST OF BOOKS FOR RURAL SCHOOLS AND COMMUNITIES.

The committee has endeavored to make out a list of books for study and reading for parents, teachers, and pupils in the country schools. It wishes to acknowledge the assistance of President F. W. Parker, of Professor L. H. Bailey, of Cornell University; Professor F. H. King, University of Wisconsin, and Professor D. L. Kiehle, of Minnesota.

Colonel Parker makes this suggestion: "The mere reading or study of these books, without copious illustrations direct from nature, would be like reading any other books without experience back of them. My suggestion is this: that the books be read in connection with the study of nature. The teachers can easily make the right selections; for instance, the study of soils in the time of plowing, the study of plants in the time of growth, etc. Specimens may be brought into the schoolroom, or better, the pupils may go to the specimens by field excursions.

"I am quite sure there are many other books, but I have not had sufficient time to get hold of them.

"I wish to call the attention of the teachers to a fact that should be well known, that the United States government publishes some of the best books on farming and nature known. I have appended a very brief list here, but the trustees of schools and principals of schools can very easily get all of these valuable documents from their representative in Congress."

AGRICULTURE.

The Soil, Franklin H. King (Rural Science Ser.). The Macmillan Co. Reading and study for school and home; excellent for study of upper grades, and farmers, meetings.

The Fertility of the Land, J. P. Roberts. The Macmillan Co. Reading and study for home and school. Excellent.

First Principles of Agriculture, Edward B. Voorhees. Silver, Burdett & Co. Reference.

Irrigation Farming, Lute Wilcox. Orange Judd Co. Reference.

Farm Drainage, C. G. Elliot. United States Department of Agriculture (Farmers, Bulletin No. 40). Reference.

Tillage and Implements, W. J. Malden. G. Bell & Sons. Reference.

Our Farming, T. B. Terry. The Farmer Co., Philadelphia. Reference.

Yearbook of the United States Department of Agriculture. Reference.

Farmers' Bulletins, United States Department of Agriculture. Reference.

Relation of Soil to Climate, E. W. Hilgard. Bulletin No. 3, United States Weather Bureau Department.

Some Physical Properties of Soil in their Relation to Moisture and Crop Distribution, Milton W. Whitney. Bulletin No. 4, United States Weather Bureau Department.

Fluctuations of Ground Water, Franklin H. King. Bulletin No. 5, United States Weather Bureau Department.

Laws of Rainfall, Gustavus Hinrichs. United States Department of Agriculture.

Forest Influence upon Climate, Water Supply, and Health, B. E. Fernow. Bulletin No. 7, Division of Forestry.

HORTICULTURE.

The Principles of Fruit-Growing, L. H. Bailey. The Macmillan Co. Reading and study for home and school.

American Fruit Culturist, J. J. Thomas. Orange Judd Co. Reference.

Landscape Gardening, Edward Kemp. Orange Judd Co. Reference.

How to Make the Garden Pay, T. Greiner. Orange Judd Co. Reference.

Principles of Plant Culture, E. S. Goff, Madison, Wis. Reference.

Plant-Breeding, L. H. Bailey. The Macmillan Co. Reference.

Nursery-Book, L. H. Bailey (Garden Craft Ser.). The Macmillan Co. Reference.

Horticulturist's Rule-Book, L. H. Bailey. The Macmillan Co. Reference.

BOTANY.

How Crops Grow, S. W. Johnson. Orange Judd Co. Reference.

How Crops Feed, S. W. Johnson. Orange Judd Co. Reference.

Familiar Trees and their Leaves, F. S. Mathews. D. Appleton & Co.

Familiar Flowers of Field and Garden, F. S. Mathews. D. Appleton & Co. Excellent for reference. May be profitably studied with the flowers and plants throughout the year.

The Garden's Story, G. H. Ellwanger. D. Appleton & Co. Reference.

How Plants Grow, Gray. American Book Co. Reference.

Botany for Public Schools, Abbie G. Hall. Geo. Sherwood & Co. Reference.

Botany for Young People, Gray. American Book Co. To be read with specimens by intermediate grades.

From Seed to Leaf, J. H. Newell. Ginn & Co. Reader.

Talks Afield, L. H. Bailey. Houghton, Mifflin & Co. For teachers. Good for field excursions.

Chapters on Plant Life, S. B. Herrick. Harper & Bros. To be studied with specimens and microscope by intermediate grades.

How to Know the Wild Flowers, Mrs. Wm. S. Dana. Chas. Scribner's Sons.

Plants and their Children, Mrs. Wm. S. Dana. American Book Co.

SCIENCE.

- Sunshine, Amy Johnson. The Macmillan Co. Reading book for grammar grades.
- Forms of Water, Tyndall. D. Appleton & Co. Eighth grade.
- Weather, Ralph Abercromby. D. Appleton & Co.
- Natural History of Selborne, Gilbert White. Ginn & Co. Eighth grade.
- The Great World's Farm, Selina Gaye. The Macmillan Co. Charming, and very profitable for grammar grades and home study.
- Elementary Meteorology, W. M. Davis. Ginn & Co. Teachers and parents, and for reference.
- A Popular Treatise on the Winds, W. Ferrel. John Wiley & Sons. Teachers' study and reference.
- Elementary Text-Book of Physical Geography, R. S. Tarr. The Macmillan Co. Excellent for study and reference.
- The Geological Story Briefly Told, J. D. Dana. American Book Co. Excellent for reading and reference.
- First Book in Geology, N. S. Shaler. D. C. Heath & Co. Unexcelled reading book for seventh and eighth grades.
- The Story of the Hills, H. N. Hutchinson. The Macmillan Co. Reading book for eighth grade.
- Monographs on Physical Geography. American Book Co. Excellent for teachers' study.
- Round the Year, L. C. Miall. The Macmillan Co. Teachers.
- Autumn, Winter, Spring. Three small volumes. Ginn & Co. Reading for third and fourth grades.
- Science Readers, Vincent T. Murche. The Macmillan Co.
- Systematic Science Teaching, E. G. Howe. D. Appleton & Co.

ANIMAL LIFE.

- Honey-Bee, L. L. Langstroth. J. B. Lippincott Co. A practical treatise. Reference.
- Manual for the Study of Insects, J. H. Comstock. Comstock Publishing Co., Ithaca, N. Y. Reference.
- Half Hours with Insects, A. S. Packard. Estes & Lauriatt. Reference.
- Buz ; or the Life and Adventures of a Honey Bee, Maurice Noel. Henry Holt & Co. Reading, eighth grade.
- Boys and Girls in Biology, S. H. Stevenson. D. Appleton & Co.
- Ants, Bees, and Wasps, Lubbock. D. Appleton & Co. Reference.
- The Population of an Old Pear Tree, E. van Bruyssel. The Macmillan Co. Grammar grades.
- My Saturday Bird Class, Olive Thorne Miller. D. C. Heath & Co. Fourth grade.
- Little Brothers of the Air, Olive Thorne Miller. Houghton, Mifflin & Co.
- In Bird Land, L. S. Keyser. A. C. McClurg & Co.
- Tenants of an Old Farm, H. C. McCook. Fords, Howard & Hulbert. Habits of insects.
- Domesticated Animals, N. S. Shaler. A. C. McClurg & Co.
- Life Histories of American Insects, Clarence M. Weed. The Macmillan Co. Entertaining and instructive.

NATURE STUDY.

- Nature Study and Related Subjects, Wilbur S. Jackman, Chicago Normal School.
- Tommy-Anne and the Three Hearts, Mabel Osgood Wright. The Macmillan Co. A good reading book for intermediate grades.

- The Beauties of Nature, Lubbock. The Macmillan Co. Home reading.
Man and Nature, G. P. Marsh. Chas. Scribner's Sons. Reference and reading.
Forest Trees, Wild Apples, and Sounds, H. D. Thoreau. Houghton, Mifflin & Co.
John Burroughs' Works. Houghton, Mifflin & Co.
Winter Sunshine. Parents and teachers. For pupils, The Apple.
Riverby. Parents and teachers. Selections for home reading.
Wake-Robin. Parents and teachers. Selections for older pupils.
Pepacton. Parents and teachers. Selections for pupils: Springs, Idyl of the Honey-Bee, etc.
Locusts and Wild Honey. Home reading. Selections for pupils: Sharp Eyes, Strawberries, Is it Going to Rain, Bed of Boughs, etc.
Signs and Seasons. Home reading. Selections for pupils: The Tragedies of the Nests, A River View, Bird Enemies, Phases of Farm Life.
Birds and Poets. Home reading.
Bass's Nature Stories for Young Readers. D. C. Heath & Co. Excellent for third and fourth grades.

MISCELLANEOUS.

- Art of Beautifying Suburban Home Grounds, F. J. Scott. D. Appleton & Co.
A Text-Book on Roads and Pavements, F. P. Spalding. John Wiley & Sons.
United States Government Reports.
Water and Land, Jacob Abbott. Harper & Bros.
What Darwin saw in his voyage round world in Ship "Beagle." Harper & Bros.
Brooks and Brook Basins, Alex. Frye. Ginn & Co.
The Story of a Stone, in Science Sketches, David Starr Jordan. A. C. McClurg & Co.
The Earth and its Story, Angelo Heilprin. Silver, Burdett & Co.
Formation of Vegetable Mold, Darwin. D. Appleton & Co.
Science Primer of Physical Geography, A. Geikie. American Book Co.
Up and Down Brooks, Mary E. Bamford. Houghton, Mifflin & Co.
Every-Day Occupations, H. W. Clifford. Boston School Supply Co.
Modern Industries and Commerce, Robt. Lewis. Boston School Supply Co.
Camps in Rockies, Wm. Grohman. Chas. Scribner's Sons.
Coal and Coal Mines, H. K. Greene. Houghton, Mifflin & Co.
The Sea and its Wonders, Mary and Elizabeth Kirby. T. Nelson & Sons.
Canoemates, Kirk Munroe. Harper & Bros.
Campmates, Kirk Munroe. Harper & Bros.
Talking Leaves, W. O. Stoddard. Harper & Bros.
An Iceland Fisherman, Pierre Loti. A. C. McClurg & Co.
Hunter Cats of Connorloa, H. H. Roberts Bros.
John Brent, Theo. Winthrop. Henry Holt & Co.
The Electrical Boy, J. T. Trowbridge. Roberts Bros.
How to Study Geography, F. W. Parker. D. Appleton & Co.
Methods and Aids in Geography, C. F. King. Lee & Shepard.
The Story of the Plants, Grant Allen. D. Appleton & Co.
Wonders of Plant Life, S. B. Herrick. G. P. Putnam's Sons.
Intelligence of Animals, Ernest Menault. Chas. Scribner's Sons.
Elementary Meteorology, F. Waldo. American Book Co.
The Food of Plants, A. P. Laurie. The Macmillan Co.
Agriculture, R. H. Wallace. J. B. Lippincott Co.
Garden Craft Series. The Macmillan Co.
Rural Science Series. The Macmillan Co.
The Story of our Continent, N. S. Shaler. Ginn & Co.

Glimpses at the Plant World, F. D. Bergen. Ginn & Co.
Animal Memoirs, Parts I.-II., S. Lockwood. American Book Co.
The Survival of the Unlike, L. H. Bailey (Garden Craft Ser.). The Macmillan Co.
Elements of Geology, LeConte. D. Appleton & Co.
Town Geology, C. Kingsley. The Macmillan Co.

APPENDIX M.

HYGIENE AND HEALTH IN PUBLIC SCHOOLS.

Dr. G. Stanley Hall has said: "What shall it profit a man if he gain the whole world of knowledge and lose his health?" In our public schools, especially in the high schools, many a promising young life has been sacrificed by over-study. The system of marks and medals, now happily disappearing from many of our best schools, has driven many an ambitious boy and girl to an early grave at the point of a pencil, because that system stimulates those very pupils who need no spur and whom the spur injures. More frequently the health of pupils is injured by ignorance of the most obvious laws of health, or by criminal neglect of those laws, and by the impure air of schoolrooms. Unsuitable furniture which cramps and distorts the growing bodies of children, and poor light which impairs the sight, have also a long account to settle with children thus ruined for life.

The evils of unsanitary schoolhouses have attracted most attention in the crowded schoolrooms of cities, but these evils are not confined to densely populated places. They appear equally in the rural districts, and they are less known only because the cases of injury are scattered, and the statistics are less easily obtained.

The vigorous country boy and girl may for a time resist the evils of a schoolroom, alternately too hot and too cold; of drafts of cold air in winter through cracks in the floor and poorly built walls; of outhouses too filthy for use and sources of moral defilement; of seats and desks, built for cheapness and not for comfort, and more racks for torture than like a proper resting place for the growing bodies of little boys and girls. But however much the injury may be concealed, the deadly work goes on in many a country school. Take a single instance. Many a man has suffered for years from hemorrhoids brought on by ignorance or neglect in childhood; neglect, because proper accommodations were not provided or not properly cared for at the schoolhouse; ignorance, because the school gave no instructions in hygiene—not the technical hygiene suitable for physicians, but the obvious, ordinary hygiene that relates to clothing, proper bathing, eating, and the excretions.

Physiology is now required by law to be taught in the schools of nearly all the states. As too frequently taught, it concerns itself about the chemical effects of certain substances upon various parts or processes of the body. Such a treatment of the subject is too abstruse for children in the schools, it goes beyond their knowledge and their experience. They need to be taught the effect of green apples upon the stomach before they are taught the effect of alcohol upon the brain. We ought to learn wisdom from the concrete teaching of nature about eating green apples in her monitory pains. People mean well when they teach the evil effect of alcohol to little boys and girls who do not know what alcohol is. It would be better to teach these children the good effect of wholesome food and drink, and especially to teach them that the whole alimentary canal should be kept in healthy, regular, and daily movement throughout, and to teach this and all that relates to the necessary bodily functions with delicacy and propriety, and without any squeamishness. Is any teacher too delicate, cultured, and refined a lady or gentleman to give this instruction concerning the bodies of the children? Then let them be relegated to the

land of spirits, to teach where the mortal coil has been shuffled off. It is high time to inaugurate a campaign of hygiene, and not the least important branch of child study is the study of their bodies, and how those bodies may be made in school to grow strong, robust, healthy, natural, at ease—"the temple of the living God."

In making the many advancements in education in recent years the pedagogical literature of the past three hundred years or more has been ransacked, and the educational philosophy of many eminent and venerable teachers has been exploited to constitute the new education—Comenius, Pestalozzi, Froebel, Herbart, and the rest; it is worth while now to bring to the front the maxim, "*Mens sana in corpore sano*," and to found an educational philosophy on that. Already we have physiological psychology which seeks to trace mental phenomena through a study of the brain, and missionaries are now learning to convert the heathen by making their bodies comfortable without their eating the missionary. Benevolence now seeks to raise humanity, both intellectually and morally, by first improving men physically. Let the schools follow the lead of philosophy and of religion in this regard.

It is well known that no child can learn well or grow mentally when in bodily discomfort. Dullness, uneasiness, and consequent disorder in a school, are directly traceable to vitiated air. If the body is numb with cold, if the feet are damp and chilled, the mind becomes stupid; and the sweltering heat of a badly ventilated schoolroom, the uneasiness of an over-loaded stomach, of constipation, and of uncomfortable clothing, will produce the same result. Moreover, an abnormal condition of the body is often the source of immorality. We blame the first Adam too much; the real Adam is nearer home, and of this generation and every generation that neglects the laws of health. The outbuildings of ill-governed schools with ill-taught children sometimes give evidence of fearful demoralization, and the demoralization is contagious, like a plague.

An important part of school hygiene, then, relates to the lavatories or water-closets. This is not the only, nor perhaps the most important, part of school hygiene, but it needs emphasis most at present, because it is nearly always neglected. In rural districts the outhouse is generally located in a remote part of the grounds, where its offensiveness may not interfere with the school, and it is the prey of tramps and bad boys who delight in defiling it. The closet should adjoin the schoolhouse, and be accessible through the house only. This location would compel its being kept inoffensive, and make it easy to do so. It should then be used by every child with the same freedom as at home in a well-regulated family. And the child should be taught in school to respect his body in every part and in all its functions—that nothing about it is defiling unless he himself makes it so; and that, while we are animals, we should be rational animals, and not brutes. Such teaching should not be indelicate nor obtrusive; but it is important, because respect for the body is at the foundation of self-respect and true manliness. This special teaching of hygiene has often been neglected through a false modesty which is highly indelicate, and which is itself the evidence of an impure mind.

For health, for comfort, and for intellectual and moral well-being, the schoolhouse should be well-constructed and suited to its use. It should stand in the middle of the grounds, high, well-drained, and ornamented with trees and shrubs. The well should be so located as to supply pure water. The architecture should be simple and show a refined taste, for the schoolhouse is an educator. It should be as convenient and as well-built as the best homes, in order that the children of the well-to-do may not despise it, and in order that the children of the poor may see how the best people live. The schoolhouse will thus become an inspirer in the young to higher living; for education is more than learning from books. It is a training also in how to live.

Churches are built as an example of noble architecture, to be an object lesson leading upward to a higher life. They are usually grander than the houses of the wor-

shippers, and the poorest man in the congregation has an ownership in them. Municipal and state buildings often display, or are meant to display, the community's ideal of a home for itself. And so the schoolhouse should exhibit the taste and to some extent the aspiration of the neighborhood. It should be a little better than the best dwelling house.

Below is an attempt to show the least that should be tolerated in any community where the Americans of the future are to be educated. The ideal room may be repeated in a single building to any number below sixteen or twenty.

THE IDEAL RURAL SCHOOL HOUSE

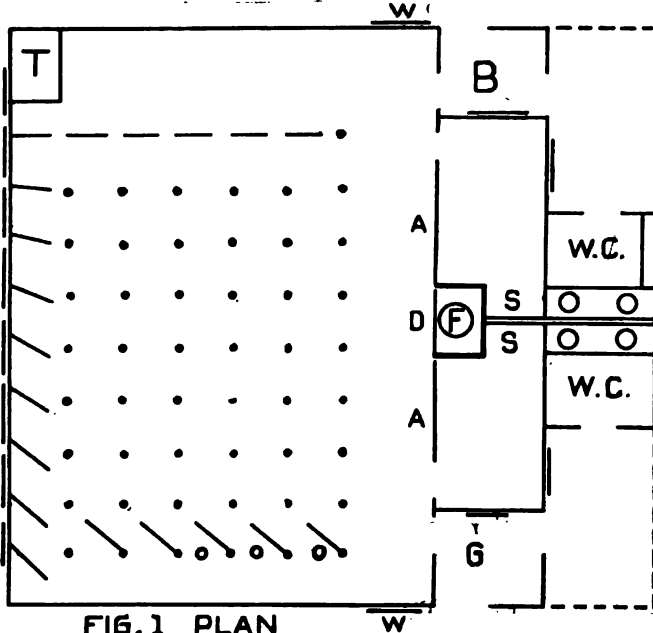


FIG. 1 PLAN

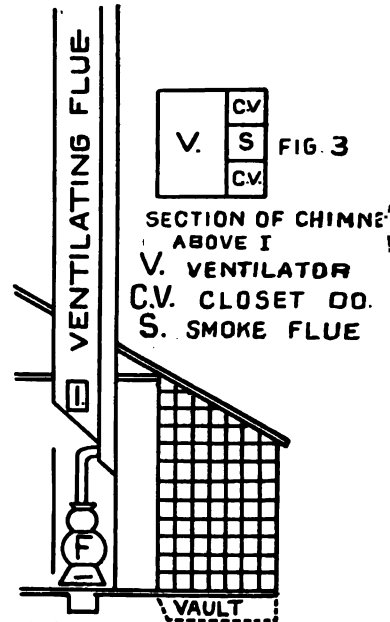


FIG. 2 ELEVATION

This plan provides for forty-eight pupils—one desk and chair in each of the squares, 3 ft. by 3 ft., indicated by the dots. The desks at the front are at right angles to the wall, and each succeeding desk toward the back is at a greater angle than the last, till about 45 degrees is reached at the last. The teacher's desk is at T in the left front. The surface of the floor is 720 sq. ft., or 15 sq. ft. each for forty-eight pupils, which is the least allowable. If the room is $13\frac{1}{4}$ ft. high, its contents are 9,720 cu. ft., or 200 cu. ft. each (the regulation number), and only 120 cu. ft. for the teacher when all the pupils are present.

Fig. 1. This represents a schoolroom 24 ft. by 30 ft., with (B) boys' entry and (G) girls' entry. The entire south side has a series of windows as near each other as the construction will permit, and extending to within three or four feet of the corners of the room. These windows should be three or four feet from the floor, and they should extend entirely to the ceiling of the room. Only the two outer ones need to be built so as to open. In cold climates all the windows should be double.

Near the entry door, both on the boys' and on the girls' side, another door leads into

the cloakroom, which is 11 ft. by 6 ft. in size, and each cloakroom is provided with a sink (S) and two windows, five feet from the floor, one looking into the entry opposite a corresponding one above the outside door, and the other looking into the back piazza. The last of these windows must be stationary, the one looking into the entry may be open in summer, but never in winter, for a reason that will appear later.

From the entry on each side of the house another door opens backward upon a piazza accessible in no other way, and enclosed with heavy lattice-work (shown in Fig. 2) or stout wire screens, and from this piazza a door leads into the closet, which is provided with a single window protected by heavy screens.

Each vault must be built as nearly air-tight as possible (preferably of brick), must be connected closely with the under side of the floors, and must have a ventilating pipe of galvanized iron leading from the end of the seat at the top and entering a separate flue in the chimney next to the smoke flue, as seen in Fig. 2.

The furnace, F (Fig. 1 and Fig. 2), has a large stove, with 10-inch fire-pot (if for coal) inclosed in a brick chamber, some 3 ft. by 3 ft., from which a door opens into the schoolroom. This door is six or seven feet high and three feet wide, and is very carefully protected on the inside with tin, or better, it may be made of tin or sheet-iron. Above this door is a transom, three feet wide and two feet high, either open entirely or filled with a screen of light wire and large mesh, and from the top of this transom and within the chamber or furnace a sheet-iron partition or diaphragm slopes backward, at an angle of about 45 degrees, to back side of the furnace.

Below the stove and in the bottom of the furnace is an opening 2 ft. by 2 ft. connecting with a fresh-air duct of the same size that extends beneath the floor to the outer walls beneath the outside steps, where it must be covered with a wire screen and be protected from the dust.

The tin door of the furnace being closed and the stove heated, the air becomes rarefied, rises to the top, is deflected by the slanting partition or diaphragm, and enters the schoolroom through the transom. At the same time the fresh air is supplied to the bottom of the furnace through the duct described above. This duct should be supplied with a valve by which it may be closed if necessary. The smoke flue of the stove is shown in Fig. 2, and behind it is the flue for ventilating the vaults.

But the warm air will not enter the room unless a corresponding volume of air is withdrawn at the same time; and this exhaust should be from near the floor, and on the same side of the room on which the fresh air enters near the top of the room. For the purpose of exhausting the vitiated air of the schoolroom, the furnace flue is extended upward through the roof; and it should be contracted near the top. This flue is represented in Fig. 2 (the large flue); and it will be heated by both the smoke flue on one side of it (which may be of metal) and by the diaphragm or slanting partition at the bottom. This diaphragm will be heated by the hot air impinging against its under side.

The vitiated air from the schoolroom reaches this ventilating flue as follows: The partition between the schoolroom and the cloakroom is raised 2 inches or 3 inches from the floor; on each side of the flue and above the diaphragm there is an opening of 18 inches by 24 inches, through which the air is exhausted from the top of each cloakroom, and as the doors and windows of this room are always closed (as said above) in cold weather, the vitiated air is withdrawn from the schoolroom into the cloakroom, where the clothing is thus warmed and ventilated.

In order to secure warmth and perfect ventilation, it will be perceived that the floor of the schoolroom and the cloakrooms must be perfectly tight, and the walls should be lined with brick, or otherwise made tight, at least three feet from the floor, and all the entry doors must shut very close. In other words, good construction is indispensable to comfort — both warmth and ventilation. It is for this reason that double windows are requi-

site in cold climates. All the warm air within which strikes the cold glass of a window is at once chilled, falls to the floor, and creates a draft. Moreover, the best-lighted part of the room is close to the window; and the first row of seats may be placed near the windows, as shown in Fig. 1, if the window is double.

At night and before the children arrive in the morning the cold-air duct and the ventilating flues (I) leading from the cloakrooms may be closed. In that case, the door (D) of the furnace being open, the air within the schoolroom will come into direct contact with the stove, rise through the transom, and thus rotate throughout the schoolroom and warm all parts of it; and children may one by one warm their feet at the stove. But when the room is filled with children, the door (D) would be closed, and the fresh-air duct and the ventilating flues (I) must be open, in order that the stove may constantly heat the fresh air and ventilate as well as warm the room.

In summer the diaphragm above the furnace may be raised to a vertical position; if then the door (D) be closed, the warm air of the schoolroom may pass upward through the transom and the ventilating flue, while the fresh air is supplied through the entry doors and windows, at W W (for this purpose and not for light), and through the two windows that may be raised in the front. In mild weather or on damp days a fire in the enclosed stove will help to produce the upward draft without heating the room.

A painful of dry earth must be thrown into each vault every day, and the contents of the vault must be removed every week. This can be done by sliding outward a water-tight trough made for the purpose and fitted into each vault. These troughs should then be replaced, and each door through which the trough is drawn should be securely locked.

The house should have a dry, clean, and warm cellar; but where this cannot be afforded the house should stand on a sufficient number of posts two or three feet high and boarded around to the ground. These posts, and especially the foundation of the chimney and of the vaults, must be absolutely secure from frost, and the floors might be boarded below the joists and plastered between; and there must be felt or thick layers of paper between the floors. A cold floor is costly and dangerous; and the cold schoolhouse costs more in the end, in health and in fuel, than it costs to build a tight, warm house at first.

As to the light. The best light for the pupil comes from the left, with no cross lights; but if the whole left side of the room is one continuous window, then the pupils in the back part of the room will face the light, though the window is at the left. To obviate this difficulty the first rows of desks might be placed with the axis at right angles to the window. After the first two rows, each desk is placed with its axis at a greater angle than the last, till the last row is at an angle of 45 degrees. Such an arrangement is novel, but upon reflection there seems to be no necessity for the prevailing rectangular placement of school desks, with the teacher at the middle front. In this plan the teacher is at the left front of the pupils at T, and the oblique situation of the desks is shown. This position requires chairs and not shelves for seats—the only rational seat; and there is no excuse for any but adjustable seats and desks.

The best light is from the top of the window. A window properly lights the room only at a distance of one and a half times its height. The south light is the best. The north light is too cold in winter and lacks the effect of the sun's rays in the room—chemical and hygienic effects not explained, but known to exist. The east and the west window admit the slanting rays in the morning or afternoon. In summer, though the rays are hot, they are nearly vertical at noon and do not shine directly in at the windows of the south exposure. But there should be very light shades to roll from the top and temper the light when it is too bright, and dark shades to roll from the bottom to shut out the light sometimes—to shut it out from the bottom because, as said above, the light from the top of the window shines across the room. An awning of white cotton cloth on a

rectangular frame outside the window would be inexpensive and worth many times the cost in a single summer.

Any intelligent carpenter could build a house like the one described, and if some architect would build into it only a little good taste and chaste beauty, the house as well as the teacher would be an educator and a public benefactor.

A. P. MARBLE.

New York city.

APPENDIX N.

SCHOOL SYSTEMS.

ONTARIO.

[From Ontario School Regulations, Arts. 93-6.]

The system of public education in Ontario requires that every position be filled by a trained teacher, and no teacher receives a permanent certificate who does not possess the requisite qualifications as to (1) scholarship, (2) a knowledge of pedagogical principles, and (3) success in teaching as shown by actual experience.

The institutions for the preparation of teachers are, first, the county model schools, which one must attend for a session in order to be eligible for examination for a third-class certificate, without which no one can begin teaching in any public school in Ontario; the normal schools, of which there are two, one at Toronto and one at Ottawa, and which one must attend in order to obtain a second-class certificate and a permanent license; and the School of Pedagogy at Hamilton, in which are trained the first-class public-school teachers, the assistant and principals of high schools and collegiate institutes, and the public-school inspectors. Only first-class teachers can be appointed principals of county model schools or members of county boards of examiners. The board of examiners for any county may, with the approval of the education department, set apart any public school to be a county model school for the professional training of teachers.

There are sixty county model schools in Ontario, averaging about thirty pupils in attendance. Pupils may be admitted on a high-school primary certificate, which is granted to those who complete the first two years of a high-school course, although the pupils have often completed three or four years of the course. The course of study and training continues from the first of September for four months; it comprises school organization and management, methods of instruction, school law and regulations, music, and physical exercises; the course in training comprises observation of the work of the regular teachers, practice in teaching, criticism of work, and discussion of methods.

The minjster of education may prescribe a course of reading for teachers of public schools. The course shall extend over three years, comprising three books each year. Any teacher who desires a certificate of having taken the public-school teachers' reading course shall make a synopsis of not less than ten nor more than fifteen pages of each book read, and transmit the same to the inspector of his district. The managing committee of each teachers' institute shall appoint two persons who, with the inspector, shall form a committee, to determine whether the synopsis made by the teacher indicates that the books have been intelligently read, and for each book so read the inspector shall issue a certificate, and any teacher submitting a certificate for nine of the books prescribed shall receive a diploma certifying to the completion of one full reading course of three years.

In Ontario the law requires that the inspectors of schools shall hold first-class certificates, certifying to completion of the course of professional study of the School of Pedagogy at Hamilton, and shall have had three years' experience in teaching.

NEW BRUNSWICK.

The salaries of teachers shall be provided for from the three following sources, *vis.*: firstly, the provincial treasury; secondly, the county school fund; thirdly, district assessment. All other items of fixed or current expenditure shall be provided for by district or local assessment. In the distribution of the provincial and county school fund the number of days of school session and the average attendance are made factors of such importance as to encourage a long school year (average for the province, 215 days in 1895) and regularity of attendance.

The amount of provincial and county money to be received in any district in aid of schools will depend almost exclusively on the direct efforts made by the inhabitants of each district in maintaining their own schools . . . and every such effort will be duly supplemented by funds from the county and province. ("Manual of School Law of New Brunswick," Arts. 12-23, and Remarks, p. 56.)

MANITOBA.

In reply to inquiries contained in the circular of the National Council of Education, forwarded by your correspondent at Regina, I beg to say that there is one normal school for the province for the training of first- and second-class teachers, and four training schools for professional instruction of teachers holding third-class certificates. No academic work is done in either the normal or training school. The normal-school course is five months in length, that of the training school three months. These institutions are public, and supported by the province and controlled by the educational department. The training schools are conducted by the inspectors, who spend eight months of the year in the rural schools and are thoroughly conversant with the requirements of rural districts.

No one is admitted to either normal or training school until he has a non-professional certificate of the grade for which the school affords professional training. The examination for third-class certificates covers the ordinary subjects of the public-school course, with physics, botany, algebra to the end of simple equations, and one book of Euclid, with deductions. Certificates of this grade are good for three years, subject to a limitation to be hereafter mentioned.

The second-class non-professional certificate covers ground corresponding in the main with the requirements for matriculation into Harvard, and the first class corresponds with the first year of university work, omitting in each case all languages except English. About one-third of the time of the above courses is given to practice in teaching. In the schools of the towns where the normal and training schools are situated practice is given in each of the grades, but the time spent in the first four grades is about three times that spent in the second four. Practice in teaching and a written examination on history of education, psychology, management, methods, etc., count equally in determining a candidate's fitness to receive a certificate. The certificate issued is good for one year. If, after this year of probation, the inspector so recommends, a third-class certificate, good for three years, or a second or first (according to the grade of non-professional certificate held), good for life or good conduct, is issued. Otherwise the certificate lapses.

Heretofore the holder of a non-professional certificate was allowed to teach without training for one year. Hereafter, however, no teacher will be allowed to teach in any public school who has not at least the professional training above outlined for third-class certificates.

About 75 per cent. of the graduates are from rural districts and country towns. Sixty-six per cent. of the teachers employed in the province in 1895 were trained. After this year all teachers will have training.

Institutes are held by the inspectors and normal-school instructors at points chosen by the department of education. They last from two to three days. Eighty per cent.

of the teachers attend. The aim of these institutes is to stimulate to professional study. They are a valuable means of stimulating teachers and arousing interest.

Circulars are sent to teachers and secretaries of school districts, giving notice of place of meeting and programme. Provincial grant is payable to districts whose teachers attend the institutes, as if the school were open.

Upwards of 80 per cent. of the teachers of the province are organized into voluntary associations. The aim and scope of the work are much the same as those of the institutes, but the work is done by the teachers themselves instead of by the normal instructors and inspectors. Several associations sometimes combine to secure the services of a prominent educationalist from outside of the province. The only qualification for membership is that of being a teacher actively engaged in teaching.

Reading circles have been organized only to a limited extent, and the data for reply cannot be obtained. All teachers take one or more teachers' journals. The desirability of doing so is kept before teachers by the inspectors. Certificates to teach are granted only by the department of education for the province, so that the provincial or state certificate is the only one valid here.

Teachers are chosen by the school boards of the various districts. Teachers in rural schools are engaged from year to year as a rule. In towns and cities the engagement is continued without re-election. It is impossible to say to what extent anything besides merit operates to determine the choice of teachers in rural districts. In towns appointments are made largely on advice of the supervising officer.

The maximum salary is \$1,400 in towns and \$720 in rural schools, with an average of \$428 for the province and \$368 for rural districts. In ten years the average salary has fallen about \$90 per annum, owing in part to general depression and in part to competition of large numbers of young teachers using the profession as a stepping stone to some other line of work.

All improvement in educational work, and in status of teacher, must come through better education of the teachers. It is only where our class-rooms are filled with cultured and earnest men and women that teaching will become a profession, and take rank in public estimation in accordance with the importance of the interests committed to the schools.

Winnipeg.

DANIEL MCINTYRE.

FRANCE.

In France, which has made so great an effort in late years to advance popular education, the law requires that the candidate for the office of inspector of schools shall be at least twenty-five years of age, shall have had several years' experience in teaching, and shall hold certificates indicating a high grade of scholarship. In his written examination he is required to write a paper on some subject in pedagogy, and one on some subject in school administration; then follows an oral examination covering a wide range of psychology, ethics, pedagogy, and school administration; and then a practical examination, which consists of the inspection of a school, followed immediately by a verbal report.

In view of the increasing importance of inspection it is recommended that the standard be raised so as to require a certificate of qualification for a professorship in a normal school.

NORWAY.

The main obstacle in the way of perfecting the rural schools of Norway is of a geographical kind. Mountain peaks and ranges, valleys and woods, rivers and rapids, are so many barriers to human intercourse of any sort. There are few clusters of farms or cottages sufficient to form villages, so that children very often have to go miles to and from school without other means of transport than sleds, skis, or skates.

In spite of these natural hindrances, Norway is well known to have a more enlightened rural populace than most other countries. Every Norwegian peasant under fifty can read, write, and figure; all can read.

Some, or rather many, years ago the country districts of Norway had itinerant teachers, perambulating from farm to farm, gathering about them the nearest children where they came. Teaching of this kind was necessarily very defective, and often the teachers knew so little that it was a case of the blind leading the blind. Norway has changed all that. For twenty-five years or more the teaching force has been uniformly good, trained in the state-endowed seminaries or normal schools. A great majority of these rural teachers are sprung from the people amongst whom they work; they have the advantage of knowing their pupils' condition, peculiarities, and points of view.

Most inhabitants of the city above the laboring classes send their children to higher schools (*Borgerskoler* and *Middelskoler*), if they in any way can afford the school fees. In the country it is different. There even well-to-do farmers send their children to the public schools; they have no choice, unless, indeed, they go to the trouble and expense of employing private tutors, which some do.

As a rule, the school children are divided into two classes or grades, attending alternately every other day; each child, in this way, getting about fourteen to eighteen hours' schooling a week, or say 500 to 550 hours a year, the summer vacation lasting only one month.

The branches taught are reading, writing, arithmetic, singing, history, political geography, grammar and composition, religion, and, sometimes, drawing. Norway has an established church (the Lutheran), and all its public schools, therefore, have something of a parochial stamp. Biblical history and the catechism have their hour, or even two, daily—a serious drawback, admitted to be such both by religious persons and those more latitudinarian. Dissenters' children are, however, exempted from religious instruction, if their parents so desire.

To an American these school hours may seem few; but then the Norwegian children have an advantage over the American: above the primary grade no time is wasted on spelling, it being taken for granted that any child who has arrived at a tolerable command of the mother tongue knows how to spell. To be sure, the Norwegian language has fewer difficulties of pronunciation and spelling than the English.

Quite a prominent factor in the educational system of Norway are the authorized readers. Beginning with short rhyme and moral stories, they carry the child through the country's great past by means of selections from the sagas; contain chapters on botany, zoölogy, physics, and physiology, besides selections from the poets; but the best thing about these readers is their valuable information on almost all topics of vital national interest, from the Lofoden fisheries to the mining industries; they give, in short, a complete picture in miniature of the whole country.

Of late these readers are being discarded for one that promises to be still better, especially in a linguistic respect. As far as language is concerned, Norway is in a somewhat unsettled condition, chiefly in the rural districts. It has an heirloom of old Norse; its various dialects are direct descendants of the language still spoken on Iceland; but its official language is Danish. Of late a fusion of the two has been effected, there is an imperceptible but real change going on, new words are constantly being imported from the dialects into the literary language. Now the chief purpose of the new reader, quite extensive in matter, is to get the actually spoken language as near as possible, the objections to the old readers being that they are too old-fashioned, "bookish."

As to the teachers of the rural districts, they are generally very able men (women teachers are employed in the cities only). They are not men of the world, to be sure; but, looked down on by their urban brethren, living on a pittance, they are, perhaps, truer

"servants of the idea" (to use an old Norwegian expression) than many more favored and respected men. I have often thought that the branches formally taught in a Norwegian country school are of little significance in comparison with the loftiness of intellectual and moral aim often imparted by the teachers to their scholars.

The country schooling is nominally ended at the confirmation age, say fourteen. But in many places the education is continued in the half-free night schools, where the common-school branches are taught as before, special stress being laid on composition, history, and national literature. Under an able teacher these popular evening schools are very delightful, the teacher often being more of an older and wiser friend than a formal instructor.

A few words must be given to the so-called people's high schools (*Folkehøjskoles*), institutions patronized by young men and women generally better off. These institutions were founded by the Danish clergyman and educator, Grundtvig. They have always been of more importance in the land of their origin, Denmark, than in Norway. The principals of these schools are generally university-trained, high-minded men, and many of the leaders in Norwegian public life and literature have been connected with them. Of these schools it might be said what Emerson said of books, they are there mainly to inspire. They might also be styled rural counterparts of the university extension and Chautauquan movements. Much of the best in Norwegian national life can be traced directly back to these schools. They are, however, high schools only by courtesy.

Norway is a democratic country. For that reason forces are always at work in the direction of lifting the lower strata up into the daylight of culture and knowledge. Conventions of teachers and educators for the purpose of furthering this aim are very common. All the while self-education is going on. But a few nights ago I read the following letter addressed to a Christiania editor:

"We have an association of young men here, and a library of about 2,000 volumes. We meet once a week, and have readings and lectures. Last week we had a lecture on Schiller's 'Wilhelm Tell.' With Goethe and Schiller I am fairly well acquainted, but, as Dante is to me an honored name only, please recommend me a good translation of his works."

This letter from a young farmer voices a yearning for light and culture quite common in the rural districts of Norway.

OSCAR GUNDERSEN.

Chicago, Ill.

APPENDIX O.

EXTENSION WORK IN RURAL SCHOOLS.

The following extracts are from a report upon Extension Work in Agriculture, by Professor L. H. Bailey, of Cornell University, Ithaca, N. Y.:

The plan of effort in this teaching was to visit two schools during the day, one in the forenoon and one in the afternoon. The arrangements were made in advance with the school commissioner or the trustees, and the fact that the speakers were to be at the schoolhouse was ordinarily announced some days in advance, so that parents and friends could visit the school at that time if they chose. The teacher was in every case willing to omit the regular exercises for an hour or two, in order that our instructors might take up the work of object teaching with the children. The motive in this work was to find out just how the pupils could be reached by means of object-lesson teaching, and just how much interest they would be likely to manifest in agricultural matters in case it were ever found to be desirable to introduce such teaching as a part of the district school work. The instructor would first explain the reason for his coming, and give the school

to understand that no new text-books were for sale and that no new classes were to be required at the hands of the teacher. He then ordinarily took up some simple object lesson. It might be, in one place, a stalk of corn which he had in his hand, and the process of growth of which he would explain from seed to harvest; it might be, in another case, the germination of a bean or a pumpkin seed; it might be, in another case, the habits or structure of a potato bug or some other insect; it might be, again, the reasons why there were knots and knot holes in the woodwork in the schoolhouse; it might be a very elementary talk upon the different plant foods which are in the soil; it might be, in other cases, a very brief sketch, with charts, of some fungus; and so on. These exercises were uniformly well received by both the pupils and the teachers, and this work has, I think, awakened more inspiration in the minds of our instructors than any other attempt which we have yet made to reach the people. The teachers in the schools have without exception expressed themselves as willing and desirous of taking up some such simple exercises as a rest for the pupils two or three times a week, if only they themselves could be instructed in the proper methods of carrying on the work. In order to afford this instruction to the teachers, we are now proposing to issue a series of experimental leaflets on object lessons and place these in the hands of the teachers.

There is no doubt of the necessity for work of this kind with the children. The love or antipathy of the farm is engendered at a very early age in the minds of the young. This has been demonstrated in these October meetings, when we have asked those children who live on farms and who still desire to do so to raise their hands, and we almost uniformly find that the number who desire to live on farms is far less than those who actually do live on them. With these children, ranging from six to fifteen years of age, the question of pecuniary profits upon the farm has appealed very little, but they are influenced directly by the environments under which they are living. These environments must be improved; and if they are, there is every reason to expect that children will love the country better than the city. We have thought, therefore, that it is eminently worth the while to instill the love of nature and the knowledge of a multitude of living things in the minds of the children. An important question here arises: What is to be the future of our rural schools and of the agriculture of the state if the present generation, as seems so clearly indicated, is not satisfied with rural life and feels no interest in maintaining or contributing to the agricultural and educational interests of the state? While many more rural schoolhouses must become deserted, there are thousands of children already in our cities who are deprived of school advantages because adequate room does not exist for them to get into the schools of the city. The further problem also arises of the difficult economic questions to be met in our cities as the result of congestion of population. The standard of teaching had been much improved in New York state. It had been gratifying to meet so universally teachers who are not only well qualified, but who are doing excellent work in their schools, and who have the true teaching spirit. Our educational forces are thoroughly efficient and well equipped, but there is a need of different application of our school work in rural districts. The life of the district needs to be changed, and it can in no way be so effectively done as through our schools. The best work cannot be done in schools with an attendance of only half a dozen children. School districts will be forced to even greater consolidation in the future, and it would be desirable if families could also be consolidated, for it is the lack of social opportunity that is felt. It is the isolation of the farm home that the boy and girl dislike in these days of close communication and contact with the world which are brought about by steam and electricity. School grounds could be enlarged. They should furnish the opportunity for planting trees and shrubs; for the planting of seeds and growing of flowers; for having a nicely kept lawn, and, in time, these things, with their influences, would extend to the homes of children who do not have them and bring with them those

attractions and interest that make a home what it ought to be, pleasant and inviting in its surroundings.

All this work, as I have said, has been experimental—an attempt to discover the best method of teaching the people in agriculture. We believe that the most efficient means of elevating the ideals and practice of the rural communities are as follows, in approximately the order of fundamental importance: (1) The establishment of nature study or object-lesson study, combined with field walks and incidental instruction in the principles of farm practice in the rural schools; (2) the establishment of correspondence instruction in connection with reading courses, binding together the university, the rural schools, and all rural literary or social societies; (3) itinerant or local experiment and investigation, made chiefly as object lessons to farmers and not for the purpose, primarily, of discovering scientific facts; (4) the publication of reading bulletins which shall inspire a quickened appreciation of rural life, and which may be used as texts in rural societies and in the reading courses, and which shall prepare the way for the reading of the more extended literature in books; (5) the sending out of special agents as lecturers or teachers, or as investigators of special local difficulties, or as itinerant instructors in the normal schools and before the training classes of the teachers' institutes; (6) the itinerant agricultural school, somewhat after the plan of our horticultural schools, which shall be equipped with the very best teachers, and which shall be given as rewards to the most intelligent and energetic communities.

All these agencies, to be most efficient, should be under the direction of a single bureau wholly removed from partisan political influence and intimately associated with investigational work in agriculture. Such a bureau should also have most intimate relations with the Department of Public Instruction, for not only must the public schools be reached, but teachers must be trained. The teachers in our public schools are now of a high grade, and they will quickly seize opportunities to prepare themselves to teach the elements of rural science. There should be facilities placed at the disposal of every normal school in the state, whereby it may receive courses of lectures upon rural subjects from teachers of recognized ability, and teaching-helps, in the way of expository leaflets should be placed in the hands of every teacher who desires them. All this work of carrying the modern university extension impulse to the country is too important and too fundamental to be confined to any one particular agricultural interest or to any one district of the state; and it is a work, too, which should be treated as a teaching extension and not as an experiment-station extension.

In conclusion, I must say that the farmers, as a whole, are willing and anxious for education. They are difficult to reach because they have not been well taught, not because they are unwilling to learn. It is astonishing, as one thinks of it, how scant and poor has been the teaching which has even a remote relation to the tilling of the soil; and many of our rural books seem not to have been born of any real sympathy with the farmer or any just appreciation of his environments. Just as soon as our educational methods are adapted to the farmer's needs, and are born of a love of farm life and are inspired with patriotism, will the rural districts begin to rise in irresistible power.

APPENDIX P.

INSTITUTES IN PENNSYLVANIA.

1. Every county holds an institute annually for a week. Towns, cities, and boroughs hold separate ones for a day or two, or for a week. The course of instruction and the corps of instructors in county institutes are entirely determined by the county superintendent, who is always an experienced teacher.

The considerations that secure attendance are: (1) Continuance of salary for the week, if the time be spent at the institute; (2) closing the schools by law during the institute week; (3) the knowledge that the county superintendent will discriminate against teachers not in attendance, and that directors will do likewise; (4) an institute programme that attracts, that wins outsiders interested in education.

Only sickness keeps teachers away as a rule. It is unusual for more than one in a hundred to be absent. Often every teacher is present. The effect of the institutes upon the schools is most potent. The professional spirit of the teachers is intensified, the quality of the teaching is improved, and the interest of the public in education is aroused. It is a great revival period, covering the state, the audiences being limited generally by the capacity of the largest halls available.

2. Local institutes are held at different dates in different sections of almost every county, conducted by the teachers of the neighborhood, and are attended by teachers and pupils from adjoining sections. There is generally but one local institute a year in each section. It continues for one day. The subjects all relate to work in rural schools.

Pennsylvania.

D. J. WALLER, JR.

APPENDIX Q.

THOMAS ARNOLD (1795-1842).

A STUDY FOR RURAL TEACHERS.

We are to study this month the contributions of Thomas Arnold to educational doctrine and practice. One of the great biographies in English literature is Dean Stanley's "Life of Thomas Arnold." An American educator says that to become familiar with this biography marks an era in the life of a teacher. For material concerning Dr. Arnold's pedagogical work consult Oscar Browning's "Arnold and Arnoldism" (*Foundations*, of February, 1897), Payne's "Lectures on Arnold" (pp. 129 and 261, Vol. IV., *Foundations*), "Tom Brown at Rugby," and Carlisle's abridgment of Stanley's "Life of Arnold."

The discussions to take place at the institute session, to be held on the 13th proximo, will be founded upon the following questions:

1. Give a brief biographical sketch of Arnold, calling especial attention to events having formative influence upon his character.
2. Describe the school at Rugby.
3. How did Arnold contribute toward dignifying the profession of teaching?
4. What was his theory with respect to teaching morality?
5. Compare Arnold's views concerning school management with the views advocated respectively by Locke and Herbert Spencer.
6. Prove: Arnold hated shams.
7. Discuss two excellent characteristics of his instruction.
8. What practical lesson with respect to self-government should the teacher learn from the study of Arnold?
9. Of what feature of the modern English school would Arnold have entirely disapproved, and upon what grounds?
10. To what one thing, above everything else, do you attribute Arnold's success?
11. Give in parallel columns a comparative view of the contributions made to educational history by Ascham, Locke, Spencer, and Arnold.

Each of the following paragraphs has bearing, direct or indirect, upon this month's lesson:

1. "A schoolmaster's influence is with the young, the strong, and the happy; and he cannot get on with them unless in animal spirits he can sympathize with them, and show them that his thoughtfulness is not connected with selfishness and weakness."—Arnold.

2. "What I want is a man who is a Christian and a gentleman, and one who has common sense and understands boys. I do not so much care about scholarship, as he will have immediately under him the lowest forms in the school; but yet, on second thought, I do care about it very much, because his pupils may be in the highest forms; and, besides, I think that even the elements are best taught by a man who has a thorough knowledge of the matter. However, if one must give way, I prefer activity of mind and an interest in his work to high scholarship; for the one may be acquired far more easily than the other."—From one of Arnold's inquiries for a master.

3. "A master should have sufficient vigor of mind and thirst for knowledge to persist in adding to his own stores without neglecting the full improvement of those he is teaching."—From a letter of Arnold to a newly appointed master.

4. "The lapse of years has only served to deepen me in the conviction that no gift can be more valuable than the recollection and inspiration of a great character working on our own."—Dean Stanley, referring to Arnold.

5. "There is no short or royal road to good teaching other than the king's highway of good living. He who wishes to teach well must, first of all, try to live well. He who wishes to do something in his chosen life-work, must aim to be something. He who wishes to have a good influence, must first be a good influence."—James H. Carlisle, of South Carolina.

6. "Not the most eloquent exhortations to the erring and disobedient, though they be in the tongues of men or angels, can move mightily upon your scholars' resolutions till the nameless, unconscious, but infallible presence of a consecrated, earnest heart lifts its holy light into your eyes, hallows your temper, breathes its pleading benedictions into your tones, and authenticates your entire being with its open seal."—From Huntington's "Unconscious Tuition."

7. "The glory of the children is unity with nature; the glory of the teacher is unity with childhood."—G. Stanley Hall.

W. S. SUTTON.

Houston, Tex.

APPENDIX R.

INTELLECTUAL AND MORAL EDUCATION.

[From "Les Nouveaux Programmes des Écoles Primaires," a handbook containing the course of study, time tables, directions, and explanations for the guidance of the teacher.]

INTELLECTUAL EDUCATION.

The aim of intellectual education in the common school is not to give an exhaustive course of instruction, but to secure to the child the practical knowledge along many lines which he will need in life, so taught as to exercise his faculties, cultivate and enlarge his mind, and thus constitute a true education.

To attain the end of true education it is demanded that there be a continual interaction of the minds of teacher and pupil. The teacher must lead the pupil from the known to the unknown, from the easy to the difficult, from the study of concrete realities to the abstract idea, thus developing the power to compare, to generalize, to reason, without the aid of material examples. The teacher must respect the pupil's intuitive power of grasping, not all truths, but the simplest and most fundamental, and must take care not to waste time in idle discussion, nor in the acquisition of useless knowledge. He must follow the guidance of nature, developing the judgment of the pupil by leading him to judge, the power of observation by making him observe much, the power of reasoning by aiding him to reason for himself.

MORAL EDUCATION.

Moral education is designed to complete, to elevate, and ennoble all the other instruction of the school. While the other studies develop skill and cultivate intelligence in certain special lines, moral instruction tends to develop the essential character of man himself. The power of moral education depends less on the precision and the logical connection of the truths taught than on strength of feeling, liveliness of impression, warmth of conviction. It moves the will. It does not undertake to analyze all the reasons for moral action, but it aims, before all else, to produce and to repeat the act; to form a habit of thought which will govern the life. It is not to be considered a science so much as the art of inclining the will toward the good.

In moral instruction the teacher represents society. He is to organize, and to make clear and definite, the fundamental moral ideas which the child brings to school; to strengthen these ideas; to make them a motive power in the habitual conduct of life, and thereby to train the child for the varied duties of citizenship.

The moral lesson must be kept distinct in character and form from other lessons. It is not enough to give the pupil correct ideas and to furnish him with wise maxims: he must be led to feel the majesty of the moral law. The teacher must keep clearly in mind that it is for him to develop, to render acute, to correct, to strengthen the moral sense by exercising often, but with extreme care, the conscience of the child. The instruction should be limited, especially in the earlier years, to the essential elementary points, to those which are clear, simple, yet imperative; avoiding the finer developments of ethics which are appropriate only at a more advanced age, it should aim to lead the child to a moral life by such an accumulation of beautiful examples, of good impressions, of wholesome ideas, of salutary habits, and of noble aspirations, that he may carry from school with his acquisitions of elementary knowledge that which is far more precious—a good conscience.

Success in this instruction demands that the teacher be an example of what is taught; that he avoid a mechanical method; that he feel, himself, the true character or force of every lesson, and that he watch the moral development of his pupils with the same solicitude as he watches their progress in scholarship; that he have as much care for the development of character as for that of intellect. This alone can give to the teacher the title of educator, and to elementary instruction the name of liberal education.

APPENDIX S.*CONTINUOUS SESSIONS IN NORMAL SCHOOLS.*

[Inserted at the request of the Chairman of the Subcommittee on Supply of Teachers, as a suggestion worthy of careful consideration.]

A plan for continuous sessions in normal schools has been devised by President Shepard of the State Normal School at Winona, Minn., which, by virtue of a recent act of the legislature, will be entered upon July 1, 1897. It provides for continuous sessions in the schools at Winona and Mankato of four quarters annually of twelve weeks each. The quarters will open respectively July 1, October 1, January 1, and April 1. This arrangement of quarters is designed in the interest of the rural school-teachers. New classes in all subjects will be commenced each quarter, and classes will graduate each quarter. Any rural school-teacher will be able to attend at least one full quarter each year. The work of each quarter will constitute a unit of credit on the regular courses of the school. The subjects and methods of instruction in the earlier quarters of the several courses will be those which are especially suited to the needs of teachers of rural schools.

A special summer-term course of six weeks, from July 1 to August 15, is provided for those whose schools begin before the close of the regular summer quarter (October 1). The work of this term will also apply on the regular courses as a minor unit of credit.

The advantages of this plan are apparent. The valuable and extensive equipments of the state normal schools will be made available throughout the year instead of standing idle, as now, many weeks during that part of the year when teachers, especially rural school-teachers, are most at liberty to attend school.

Teachers in rural-school service may take up and pursue regular normal-school courses without withdrawing from teaching service. This will be a distinct gain, both to the teaching supply and to the self-supporting teacher who must alternately teach and attend school.

It is well known that this constitutes the most valuable and most progressive class of rural school-teachers.

The beginning of new classes each quarter enables teachers to attend school with equal advantage any quarter when at liberty. The present practice of normal schools in graduating classes but once a year and at the close of the graded school year is greatly to the disadvantage of the rural schools. These graduates are largely absorbed by the graded schools, which just at that time of the year are organizing their teaching corps for the following year. When the rural-school officers later in the year apply for graduate teachers, there are usually none to be had. Under the "Winona" plan at least three classes will be graduated at times during the year when the graded-school situations are not open and just when the rural-school situations are open. This will tend to direct a large and valuable supply of normal-school graduates into rural-school service.

DEPARTMENT OF KINDERGARTEN EDUCATION.

SECRETARY'S MINUTES.

FIRST SESSION.—WEDNESDAY, JULY 7, 1897.

The department met at the Bijou Theater and was called to order at 3 P. M. by the President, Miss Caroline T. Haven, who introduced Miss Mary C. Hall, Chairman of the Froebel Union of Milwaukee.

Miss Hall, on behalf of the Milwaukee kindergartners, gave a warm welcome to their visiting sisters.

The President responded for the visitors, thanking the Froebel Union for its affectionate greeting, and for the complete arrangements made by the union for the comfort of its guests.

Miss Ethel Vergin sang two songs, "Little Boy Blue" and a "Lullaby."

The first paper was presented by Dr. John Dewey, The University of Chicago, on "The Kindergarten and Child Study."

The second paper, "Has the Child Study Movement Any Help for the Kindergarten?" was read by Miss Bertha Payne, Hull House, Chicago.

The third paper was given by Miss Geraldine O'Grady, Philadelphia Normal School, on "Froebel's Use of Child Study."

The next number was a "Kinder-Symphonie," by the Froebel Union of Milwaukee.

This was followed by a paper, on "Methods of Child Study in the Kindergarten," by Dr. Jenny B. Merrill, Kindergarten Supervisor of New York Public Schools.

A discussion was led by Mrs. A. H. Putnam, Chicago Froebel Association.

The President announced the following committees:

COMMITTEE ON NOMINATIONS.

Mrs. A. H. Putnam, Chicago, Ill.

Miss Jessie Winterton, New York, N. Y.

Miss Hattie Phillips, Des Moines, Ia.

COMMITTEE ON RESOLUTIONS.

Mrs. J. N. Crouse, Chicago, Ill.

Miss Beulah Douglas, ———

Miss Bertha Payne, Chicago, Ill..

The meeting adjourned until Thursday at 3 P. M.

SECOND SESSION.—THURSDAY, JULY 8, 1897.

The department met at 3 P. M. at the Bijou Theater.

A violin solo was played.

The first paper was read by Superintendent C. B. Gilbert, of Newark, N. J., on "The Place of the Kindergarten in the Public School."

Mr. Gilbert's paper was discussed by Dr. W. N. Hailmann, of Washington, D. C.

Miss Katherine Beebe, Evanston, Ill., read a paper on "Kindergarten Work and Principles in the School."

The Froebel Union, of Milwaukee, sang two kindergarten songs.

Mrs. J. N. Crouse, Chicago, read the report of the Committee on Resolutions:

Resolved, That we extend our hearty thanks to all who have contributed so generously to our entertainment during these meetings; to Mr. Wm. George Bruce and the General Committee for securing this central and commodious building, and for their untiring efforts in providing for the comfort of guests; to the Froebel Union and Miss Mary F. Hall, its president, whose thoughtfulness has anticipated all our needs; to the officers and directors of the Athenæum, whose hospitality and beautiful home will long be held in remembrance; to the press for its uniform courtesy and its excellent reports, and to the soloists who have kindly rendered their assistance.

Resolved, That we reaffirm our allegiance to the great principles of Froebel, which have done so much for the advancement of all education; at the same time, we welcome any assistance from child study, and all other sources.

Resolved, That, since the kindergarten cannot reach its highest efficiency without the co-operation home and school, no effort should be spared to secure the intelligent co-operation of parents and teachers.

Resolved, That, since the kindergarten has been accorded its place in our national school system as an integral part of the same, and has been given a place in the meetings of the National Educational Association, greater efforts should be put forth by this body to increase its membership and efficiency; that to this end we urge all kindergartners present to join the department this year and to use their influence, as well, in securing other members; also, that the officers and members of the department put forth special efforts in this direction the coming year.

Respectfully submitted,

Mrs. J. N. CROUSE, *Chairman*.

The report was unanimously adopted.

Miss Mary C. McCulloch, Supervisor of Kindergartens, St. Louis, gave an address on "Ideals to be Realized by the Kindergarten Supervisor."

The report of the International Kindergarten Union was read by Mrs. Mary J. B. Wylie, Buffalo, N. Y.

The report of the Committee on Nominations was submitted.

For President, Miss Mary McCulloch, St. Louis, Mo.

For Vice-President, Miss Jenny B. Merrill, New York, N. Y.

For Secretary, Miss Mary C. Hall, Milwaukee, Wis.

Respectfully submitted,

Mrs. A. H. PUTNAM, *Chairman*.

The report was unanimously adopted.

On motion, the department adjourned.

MARY J. B. WYLIE, *Secretary*.

PAPERS AND DISCUSSIONS.

THE KINDERGARTEN AND CHILD STUDY.

BY JOHN DEWEY, THE UNIVERSITY OF CHICAGO.

While the child-study movement in name is a recent affair, and while in many of its superficial features it deserves the name sometimes given it—that of a fad—in its underlying reality it represents the culmination of educational and social forces which have been at work for generations, and presents itself as a factor which must be permanently reckoned with. It is a part of the psychological movement. It represents the attempt to state experience in terms of the individual instead of the class, and to adopt training in individual needs and powers of service.

Special opportunities for study of child psychology under unusually favorable circumstances offer themselves in the kindergarten. The following directions may be singled out :

1. There is the study of the motor and constructive activities of the child. In the adult the conventionalities of life and long periods of past training conspire to suppress most of the outward signs of mental activity. In childhood the normal relationship between feeling and idea on one side and expressive activity on the other is most obvious. And the kindergarten, by the sort of work which prevails in it, gives peculiarly valuable occasions for studying this connection. The time is ripe for restudying the gifts and occupations from the standpoint of what is now known regarding the laws of development of motor activity in childhood.

2. The kindergarten has always laid much emphasis upon the conception of play as an educational factor. Psychologists have now taken up the study of play, and are relating it both to the general principles of mental evolution and of the facts of structure of the nervous and muscular systems. Sociologists are also studying play from the standpoint of the inheritance and modification of social customs and habits. Here, too, the hour has come for reconsidering kindergarten practice in the light of the theory of play and the facts gathered from a study of the spontaneous plays of children. It needs to be looked at in the light of difference of age, of sex, of nationality, of social environment, as well as of individual temperament.

3. Much is now said regarding the artistic and æsthetic factor in education. Both because the kindergarten has from the outset laid more emphasis on the artistic than have the succeeding periods of our school, and because of the comparative freedom of expression in the kindergarten it is highly important that the manifold opportunities which present themselves along this line should be utilized.

In conclusion, the study of the kindergarten theory and practice from the psychological standpoint is important, because it enables the teachers to translate the abstract and general propositions of philosophic theory into terms of the concrete living individual, and because it is psychology which controls the adaptation of all materials and occupations to the capacities and aims of the individual child. To put psychology into kindergarten practice means to make it more vital and more personal.

HAS CHILD STUDY ANY HELP FOR THE KINDERGARTEN?

BY MISS BERTHA PAYNE, PRINCIPAL CHICAGO FROEBEL ASSOCIATION.

I sometimes think that kindergartens have been hampered by the richness of their heritage, much as the sons of a rich man, who spend without

toil ~~that which~~ the father has labored to amass. With the amassing he accumulated strength and wisdom. The greatest fruit of his labors was character. The sons spend in weakness, and accept the fortune and not the example of sturdy effort.

So we have taken Froebel's philosophy as a gift, without digging out for ourselves further treasures. We have accepted the products of his wisdom and experience, and have not learned from him to acquire power, as he acquired it, by constant, sympathetic study of the children.

The suggestions and criticisms of our friends, who are child students, scientific investigators as well as philosophers, force us either to prove the truth of our practice or relinquish it in part. They force us to go back of Froebel, to the same child nature that he studied, and to base our claims to true insight upon our own original study and reflection upon what we ourselves see and hear in the child world. They force us to reaffirm our right to this heritage of philosophy and method by searching the substratum of experience upon which the understanding of Froebel once built his structure, and seeing with our own eyes we may, or may not, find the foundation for precisely the same building, in the same measurements that he found necessary. Most probably we may not.

The body and soul are indefinitely one; yet the body is not the soul. The soul of Froebel's educational philosophy needed a body, which was found in the gifts, occupations, and games of the kindergarten. This body has for years fulfilled its function. It has made it possible for the spirit of the kindergarten to make itself felt. It has shown to us all the truth of the spirit. It has been a visible and effective sign of the educational meaning of play.

Without these needs and materials of work Froebel's teachings would never have spread as they have done. The tradition of success that has followed in the wake of the kindergarten has been due to the fact that kindergartners had not only a great aim, but a definite method of making the great purpose effective. I do not propose to give them up.

But have they done all that needs to be done? In the face of the success of the kindergarten, do we dare accept an untoward criticism of their use? With all reverence to a master mind, and a great heart, do we dare question whether the last device has been planned for the manipulation of childish fingers? Is the last mold turned in which to run the fusing elements of play? And has one man, however great, said the last word as to what shall be done under present circumstances?

There are a few reasons that make it necessary to find, at least in methods, something more than, or something different from, that which Froebel has planned. We must plan more than ever for present needs.

We must remember that, in spite of the greatness of Froebel's idea of freedom and self-activity, his out-working of these ideas in definite plans

was colored by both his environment and his heredity. We must also recognize the fact that we are training children to live under an American government, and not a German; that we are training them to obey ideals, as well as masters; that we are training them to take their places, and do their work, in a world whose social life has been revolutionized by the march of science and social freedom.

Froebel was a German, and the son of strictly orthodox evangelical parents. His whole atmosphere and heredity were that of unquestioning obedience to law of church, state, and ruler. In spite of the fact that his doctrines are those of freedom and self-government, still some of his gifts and occupations bear the undeniable stamp of the formalism, the dictatorship, of the age and country.

It is true that he lays great stress, also, upon the free use of chalk and pencil, clay and sand, as materials of expression; but we have been so fascinated by the formal work that we have neglected these other modes, and have pinned our faith too exclusively to the long sequences of work emphasizing the laws of form and number. It has been a most fitting thing that science has come to the aid of a sympathetic philosophy, and we are bound by all that is true to listen to the advices of science, and to harmonize the new with the old.

As usual, we are met with the very pertinent question, "What are the results?" "What can a kindergarten get out of child study?" We usually get out of anything just a little more than we put into it, but—let us glance briefly at some of the results which would seem to be most full of suggestion for those who are trying to assist nature in the education of young children.

Scientists have made the most wonderful discoveries of the age along the line of nerve and brain movement, and of the interrelation of mind and body, of the effects of bodily condition upon brain and nerve, and, consequently, upon the power of thought and of the effect of thought upon bodily states.

Since this is so, is it not important that we at least know what has been discovered, and then adjust our treatment of the children accordingly? Knowing, as only the experimental scientist can teach us, the indelible effect of the repetition of a movement upon the brain and nerve tissue, we will be very much more careful to watch and prevent the formation of bodily habits, and question whether any such habits formed are to be always helpful to the real self, or sometimes a hindrance.

The rut-making tendency, as Dr. Hall has called this habit formation, has opened my eyes to many things which we cause our children to do uselessly in the kindergarten. Indeed, after going a round of visits to various kindergartens, I began to fear the cultivation of a persistent clapping automatism, by this everlasting time-filler of hand clapping.

It has also led me to regard seriously this question, whether we have not required overmuch of systematic work in block building, stick and tablet laying, folding, cutting, etc., so that the mind unconsciously feels for this element as an end in itself, and strives too often to produce the symmetric, perfect thing, instead of being able to use that principle of symmetry when needed in a useful thing.

Hundreds of questions spring up along this same field of inquiry. Froebel's doctrine of early impression is forced upon us with intense meaning, when we realize how actually tender and retentive of movement habit this brain substance is.

Another line of investigation that has given substantial aid to the kindergartner is now so familiar as scarce to need quotation. It is that of periodicity in growth. The knowledge of the successive growth of powers has been followed by the definite knowledge of the fact that when a power is growing rapidly into function is the time when skillful habit is most quickly and easily acquired. This fact, seen in all its bearings, will suggest many changes. It has already caused us to lay aside all fine hand work which demands adjustment of muscles in eyes and fingers that are governed by nerves not ready for function. Measuring our occupation work by this standard, we *must* throw out all pricking and sewing in the kindergarten. Here is a plain illustration of the fact that a man's ideals are always greater than his power of carrying them out in method. Froebel's principles of the lasting effect of early impressions and of growth by stages are the very ones we are trying to obey when we demand these changes. The kindergartner, who knows that fatigue actually engenders a poison, can never allow her children to overstep their time at any given work. To her, who has followed the results of these investigations, the bad temper, or sulkiness of fatigue, takes on a new aspect. The child whose irritability is positively known to originate in physical hunger is treated accordingly. It is even comforting to find that the child whom we supposed to be an inheritor of a double dose of original sin, because of constant disobedience, is merely afflicted with defective hearing and in need of medical treatment. The recognition of what Dr. Bryan calls "plateaus in mind growth" brings up some very important questions. We are all familiar with these periods in our own lives when we seem exerting ourselves in vain to increase our power in some direction. To put it in the vernacular, "we are stumped," not for a moment, but for a measurably long time. All our efforts are as useless as pushing against a stone wall, until, after much discouragement, we find that the apparently futile struggles have been cumulative. Suddenly the obstacle rolls from the path, and we are free to bound along the higher path. We have met this thing in our experience, but it has baffled us most in the kindergarten. Sometimes it was an obliquity of moral vision which could not be straight-

ened. At other times it was a heedlessness or dreaminess that hindered all the rest in marching or playing. Every teacher has in mind hundreds of instances.

The question is, "What is the right thing to do?" Shall we wait or struggle? Which helps most quickly, and which helps for the longest time?

Along the line of arrests in development we are to be held clearly responsible, if we do not mend our ways. In this connection Dr. Harris says: "Child study will perhaps find its most profitable field of investigation in this matter of arrested development. If it can tell the teacher how far to push thoroughness to the borders of mechanical perfection, and where to stop, just before induration and arrest set in, it will reform all our methods of teaching; and it can and will do it."

"The new psychology, in its two phases of direct psychological study of brain and nerves and its observation of child development, will show us how to realize, by education, the ideals of highest civilization."

It is most important to determine, in the kindergarten as in school, how far to train for technical exactness, and how far to encourage active discussion of a variety of subjects, leaving stress on the finish of detail for a later excursion round the same subject.

I have simply touched upon a few of the principles that have impressed me forcibly, but, passing over into the more strictly mental life of the child, there are many truths that are given greater intensity, or a new aspect, by modern psychology.

The motor nature of consciousness, as emphasized today, is brought home to us as we watch the children going immediately from suggestion to execution, from thought to expression. It enhances the Froebelian demand for creative expression, for variety of expression.

This deepened knowledge is effective in reminding us to remove the stimulus when the child's response to it is one which it is not well for him to experience. It teaches anew to change the stimulus rather than to check a wrong or untimely action.

The modern doctrine of interest is not a new one to students of Froebel, yet it has penetrated farther than has Froebel's conception of children's interests. Here, again, the man's broad statement is greater than his practice, which is weak in some details.

It has been found that the interest in a thing as active, or in use, is indisputably greater than the interest felt for the number, form, or color of its parts *per se*.

The interest in a process of logical development comes chiefly in older children than those of the kindergarten, hence the flaw found in long schools of work in the occupations and long sequences in formal gift work, where the order and succession of form are supposed to be the chief interest.

The child's most helpful interests are found in the expression of complete ideas.

We cannot give much of this formal work, without substituting our interests for the child's. We are prone to forget that these successive stages of development through which a child must pass still demand study. We have not yet fully sounded the depth of Froebel's dictum, "Let the child be at each stage all which that stage calls for." We forget that something may still be done for the child after he has left the kindergarten.

I cannot leave this hasty survey without alluding to the way in which Froebel's position regarding children and nature has been strengthened by child study. Surely, Dr. Hall's conclusions in reference to children's love for nature and the introduction of nature observation, of gardening, and of pets, into the schoolroom, must reach down into the kindergarten and revive the oftentimes weak efforts of the kindergartner to bring to a child those things of nature which Froebel deemed in the highest degree essential.

There are many among us who say, "Out upon child study; it is worthless. The mind, the spirit, so transcends bodily conditions, and is so superior to its environment, that all this gathering of data of the effects of physical conditions upon mental states is folly."

To these I would say that as long as physical substance in the human body is the medium through which the soul makes itself known, so long will we need to study to keep the instrument in the most perfect condition. Science has made it possible for us to know vastly more what health of tissue and perfect functioning of organs mean, and, therefore, how better to keep the organism in natural balance, and how to adjust unbalanced states, which cause disordered functions, hindering the free expression of the transcending, but not omnipotent, ego.

Just so long as the inner ego is reached by outer stimulus by organs of sense, and in no other way, we must study to select the right stimuli. Just so long as mental action is awakened by contact of matter in some form, or the impingement of force termed physical, as it can be awakened in no other manner, just so long must our poor human endeavor be to select those outer stimuli to which the ego will most readily respond, and which will awaken the mental action most needed. In other words, environment does count. Though the ego transcends, it transcends in seizing upon that which is material, through sense, and in wringing from it the essentials for thought.

We have among us those who say, "Froebel knew and taught all that child study includes," and, "We find in Froebel all the teachings of modern psychology." So Froebel did teach in a broad way. His great principles

stand firmer than ever, because strengthened, not undermined, by the teachings of science.

No one can deny the greatness of Froebel's ideals. No one under-rates the wondrous intuitive power which enabled him to peer into the child's soul. All of his followers should hail with delight the coming of this day when science follows his insights to confirm his truth and to convince by demonstration those who cannot rest upon his intuitions without scientific proof.

We find his principle of creative expression ratified, when viewed from this new standpoint.

His idea of the educational value of play is indorsed as a whole, if not in its details. The educational force of imitation and suggestion is reaffirmed. The doctrine of interest is Froebelian. The emphasis placed by him on growth in stages is correspondent with the modern principle of periodicity in growth, save that with Froebel it was intuitive and sympathetic, while now it has been made definite by extended observations. It has, by this means, been carried far beyond his simple, broad statements.

Time will not permit me to carry the parallel further ; suffice it to say that Froebelian principle is not restated in naming the results of child study, but is elucidated, defined, deepened, and extended.

Here, as always, science, instead of wholly tearing down the product of former thought, brings additional, convincing proof of its highest truth, merely sweeping away the errors that have clung to the true substance.

As in all new movements, we have the two radical and the two conservative bodies—not among the discoverers, but among those whose cherished ideals are in some way affected by the changes in thought. We have those who drop their time-honored customs and beliefs too readily. We have the other class, which holds back, afraid to step aside from the beaten track, or which, if not afraid, is too well satisfied with the previous revelation and its own interpretations of the teachings of former masters of thought. Between the two extremes are those who owe allegiance to the truth, and not simply to one man's view of the truth, no matter how great and wise he might have been.

These are they who keep the eye and mind open for all views, and who have individual strength enough to put all that seems worthy through the alembic of individual reason ; who honor all those who have blazed the way ; who recognize the enormous debt we owe the master mind. Kindergartners must say, if they be honest, "First let us see that we be true, and next Froebelian." To all these child study has offered much, not alone in actually new material and new light, but, beyond that, the greatest help has come to the kindergartner when, struck by an apparent antagonism, she has been forced to read her Froebel anew, and to approach

his teachings with a new view of childhood, and gain the strength which comes from the effort to reconcile the modern and scientific with the old and prophetic.

Those who have honestly made this effort will agree with Ruskin, "The value of philosophy lies in the number of truths it enables one to reconcile."

FROEBEL'S USE OF CHILD STUDY.

BY MISS. C. G. O'GRADY, PHILADELPHIA NORMAL SCHOOL.

I think Froebel would have had a vision of delight could he have seen, in a magic mirror, this meeting of today, men and women whom one may call the van-guard of educational progress in this country, devoting their whole thought and time this morning to a work which he so enthusiastically urged upon educators.

The thought of child study runs underneath all his writings, vivifying, like the silent, continuous circulation of the sap in the tree, everything growing from it. An echo of child voices asking wondering questions, cooing and calling to the birds and creatures, rippling a tra-la-la accompaniment to the duller sounds of life; a trip of little feet in constant, restless activity; a memory of small hands grasping at curious treasures, worthless to other eyes; a coloring from childish fancy, that sees life and pictures in every inanimate stick or stone or tag-rag by the wayside—may be traced through every book; but some of his most definite utterances on child study are in his letters.

It would seem to be no fault of Froebel's that a German child-study association did not show us the way to ours, but one reason for our better success may be that in America the tail has to some extent wagged the dog. The German child would sit still and wait till people were ready to study it; but young America was like the riddle of the sphinx—a problem that you were obliged to study and solve, or you might be swallowed whole.

Lack of time obliges me to make very brief quotations from the "Education of Man;" it is not, we know, a work on the child, like those of Preyer and Perez, but a work on pedagogy, based on evident child study. "All education," says Froebel, "all instruction and training, should start from the outer manifestation . . . and, proceeding from the outer, act upon the inner. . . . But," he adds, "the drawing of direct inferences concerning the inner life of the child from certain external manifestations of life is the chief occasion for frequent mistakes and false judgments of young children, for so many unreasonable demands on them ;

the outwardly rough, stubborn, self-willed child is frequently filled with the desire for goodness; and the apparently inattentive boy often follows a certain fixed line of thought that withholds his attention from external things; therefore, originally, and in its outlines, education should necessarily be passive, following—not prescriptive, interfering.” Dr. G. Stanley Hall Americanizes this when he says that a certain amount of painting the town red is good for a boy, and that he may enjoy pummeling another at football, and break some windows, yet develop both brains and character. Froebel discusses the differences distinguishing infancy from childhood, saying: “It is not possible to establish a definite order as to the importance of stages of development, except the necessary order of succession, in which the earlier is always the *more* important.” I might quote, endlessly, passages on what would now be called first reactions to stimuli of food, warmth, light, sounds, pleasure, pain, etc.; on the earliest motor and sensory experiments and experiences of little children; imitative instincts; love of rhythm and color, etc.; and, still more fully, on those subjects from the “Mother-Play” commentaries; but these passages are so well known that I shall omit them. But it is worth noting how constantly Froebel calls on us to shape our teaching by observation of the children taught. “Let the boy’s eye and mind be your guide,” he says; “follow his questions thoughtfully, . . . examine the life within you and compare it with that around you. . . . We disdain altogether, alas! to examine our own youth, from which we might learn so much that would benefit our children.” This is now being done, thanks to the Child Study Association. To show how heartily Froebel is in accord with their work, I will trace one special comparison. One of the most practical syllabi sent out from Clark University last year was on “Migrations, Travel, Tramps, Truancy *versus* Love of Home.” It called for personal experiences, as well as observation of children, from the toddler’s first adventure from the home yard. The “Pigeon-house” and “Cuckoo” songs will at once occur to a kindergartner. Froebel notes this instinct and its varied stimulating causes from the first. “See, the child feels strength in his feet, tries to go forward; he is attracted by the bright, round pebble, the gay, fluttering bit of paper, a twig, a bit of straw; laboriously stooping, he secures it, and, like a young bird in spring, carries it to his nest, as it were.” He traces the growing love for exercise of strength in the youngster of four or five, the attempt to climb over obstacles, the ambition to be permitted to do things, without watching and guarding; then the longer walks; the eagerness to arrive at some new place; the satisfaction of wonder and curiosity; the joy of adventure, climbing, seeing the horizon change, widen, and drop away; the mysterious delight, with, perhaps, a spice of danger, in exploring dark caves and recesses; of making discoveries and possessing one’s self of some new treasure or experience, the feel-

ing that lies under a boy's, aye, and a girl's, delight in "Robinson Crusoe."

Froebel pleads powerfully for the satisfying and guiding of these instincts and needs, and his practical climax may be read in Georg Ebers' "Story of my Life," telling how this was worked out in the Keilhau school; the out-of-door life and holiday tramps; the Saturday night camping out, up on the mountain side; the exercises in strength and skill which carried them safe through hardship and adventure, and the carefully planned excursions which, all through August, formed as regular a part of the school course as the lessons the rest of the year. We have no doubt of Froebel's relation to the school, even though Barop was in charge at the time. "Froebel," says Ebers, "was decidedly the master who planned it." Unless we understand child study in the most limited sense, merely of recording observations in answer to questions ready-formulated; which is an injustice to it, surely the kindergarten includes it as a matter of course. There may be two reasons why this inclusion has not been fully appreciated.

Until very recently the majority of women who studied kindergarten, in spite of many bright exceptions, have been of limited ability and culture; certainly this was so in Germany; and, partly owing to the very short training course—only six months—which Froebel was obliged to give, far the greater number of its exponents have understood the kindergarten, and acted it out, only as a system of hand work, object teaching, and physical training, adapted with more or less instinctive sympathy to the powers of the children, but wholly in an empiric way, and for immediate ends. Very little study in most cases, and that little not of a thoughtful kind, was given to Froebel's own writings, and almost none to the science, psychology, and philosophy which he demands for the real understanding of his aim and method. This limited view still holds good, more than we could wish. Froebel realized how little he was understood, for he says "if three hundred years after his death there should be one kindergarten after his mind, it was all he could expect;" and he looked to the bright, analytical American student and the radical conditions here, allowing freedom of thought, for that realization.

Another reason that we suppose child study to be something different from what he meant is that we, when beginners, observe and record chiefly the unusual and remarkable things that children do, and we note bright children more than commonplace ones. Froebel based his work on the common things which the average small child likes and does, every day, and found these out, not so much by standing as a calm, scientific observer, notebook in hand, but literally by living with the children. We are told that Froebel was unable to cross the school yard without half a dozen little lads clinging to his coat-tails, pleading, "Do, do sit down

and tell us a story!" How many of our elderly school principals would be found in a like predicament? A distinguished member of the Child Study Association visited my kindergarten lately, and, though I know how he loves and understands children, I think he would have been slightly embarrassed had I invited him to lead our games and become a blacksmith or a butterfly at a minute's notice. No doubt some of our most dignified members, who are fathers and grandfathers, do occasionally become bears and whales, at the behest of their special tyrants, and play balls and blocks with them; but how many could take charge of fifty little peasant children, playing their games, and inventing new ones for them, based on their spontaneous actions? "I notice my boys always limping and hopping," says Froebel, "so I have invented a limping game."

Froebel believes with Oliver Wendell Holmes that "what we must do with books of experience is to make them alive again with something from our own lives;" unless our child students can do this, their observations must be open to the charge of incompleteness. Of the "Mother-Play" book, as an example of child study, I need hardly speak. Whether we look at its development as based on the primitive child activities of jumping and kicking, catching, swinging, pushing and pulling, tasting, smelling; at its use of the rhyme and rhythm, the child fancy and child experience which make the lasting charm of "Mother Goose;" or the deeper study of the child soul—it is an amazing achievement for a man who had never children of his own. In the capacity for taking child thought quite seriously, from its own point of view (which distinguishes the sympathetic from the merely scientific student), and in subjects, Froebel resembles Robert Louis Stevenson. Both have garden and flower and river songs; travel songs, and verses about the fishes and the mill stream; the shadows, the wind, sun, moon, and stars; the birds, especially pigeons, give subjects to both, and both sing of the blocks, the pictures, and the music itself, so dear to little people.

In two great points of Froebel's psychology, *viz.*, that, in its earliest forms, language is, and should be, rhythmic, and that the first realizations of ideas must come through moto-activity, Dr. Lukens and Dr. Hall, among others, support Froebel strongly, and reaffirm his conclusions. But I think his fame as a child student will finally rest on his discovery—for I may call it so—that language is but the interpretation into more abstract form, the translation into another medium, of the necessary previous stage, ideas perceived through deeds and things; that *comprehension and expression*, not merely of sensations, but of ideas, *must be* first through objects. Froebel's whole system of using material is grounded on what things can say to the child, and what he can say through them. Here, though not of our own will, we first part company

with the purely scientific child student. Froebel's statement that the phenomena of presence, departure, return, possession, loss, weight, number, etc., can be first appreciated only through actions and objects is accepted. We must acknowledge that, without these, such words could not have existed for the race, and cannot for the child, with any meaning. But Froebel ardently believes, not only that things may speak to a child, but that they may speak of higher ideas before it could receive them in words; that mastery, law, obedience, helpfulness, co-operation, transformation, may hint of their presence in the world through the government of a ball or heap of blocks, the magical change of cylinder into sphere, the growing of a complete sand-table picture under a dozen little hands and minds. His conviction is that there are "tongues in trees," not because they are beautiful, but because they are the expression of mind, and speak to mind in us; and that mind development is a whole; that there is no day nor hour which can be fixed as the first when spiritual ideas are possible; that the ethics which, as Emerson says, "sparkle on the chisel-edge and weigh in the plummet;" the law which is perfect, converting the soul, as it was realized by an untaught shepherd boy to whom day unto day uttered speech and night unto night showed knowledge, even though there was no speech nor language—that this, too, may come to a young child, in things, not in words. "Many," he says, "have been the observations made on the physical relations binding mother and child, and on the consideration and fostering of this joint life; but by no means yet have observations been made on the reciprocal spiritual tie between them." He would have us never leave out facts and experiences, but would remind us that biology is but one side of truth, and that he who would refer all uncomprehended actions of children to "broken neurological fragments of old reflex arcs" will make many mistakes. We need not deny or belittle the noble, ardent efforts, and the magnificent work, of the other leaders of child study. Gladly we acknowledge that many of them are far more than merely scientific students, and gladly receive the help they give, for we need them as we need Darwin and Spencer and Goethe, and all seekers after truth. Froebel would tell us that we have no right to go by the light of science alone and deny the witness of poets, philosophers, and prophets from all time, to another side of the shield; that we have no right to study children's cruelty without their tenderness and heroism, their fears without their courage, their bodies without their souls. Study on these points has been so one-sided that I should like to give one instance (though not Froebel's) which covers both points. Two little children whom I knew were lying awake in their cribs at night. Some injudicious elder had spoken before them of the horrors of eternal punishment, and the little girl, four years old, who had a difficult disposition and sensitive temper, and was often told that she was naughty, said to her

brother, "Oh, Tanny, I's so 'fraid I sall go to de pit wit Satan, I is so naughty." "Oo sall not, I'll hold oo," responded the wee lad a year younger. "Oh no, oo cannot," she replied despairingly; "I's so naughty, I sall go to de d'eadful black pit." "Den I'll go wit oo," was the ardent response. Let us study the manifestations of spirit as well as body, as Froebel urges, "in ourselves and our children, in nature and history, that we may perceive general as well as special laws of development, and that child training may receive, in these laws, its surer basis and true foundation."

METHODS OF CHILD STUDY IN THE KINDERGARTEN.

BY MISS JENNY B. MERRILL, SUPERVISOR OF KINDERGARTENS, PUBLIC SCHOOLS, NEW YORK CITY.

Many years ago there came into my hands a little book by an English writer, entitled "What is a Child?" I shall never cease to be grateful to the writer, for the *question*, as well as his attempt to answer it, have both been of great service to me. I commend the question to all young kindergartners, and hope that it will follow them, as it has me, through life, and be the means of arousing their interest in the present-day methods of child study.

I wish today simply to call your attention to two or three methods that we have actually used in New York, hoping that they will yield more results in your hands than they have in ours. They involve writing, and writing takes time and is apt to be neglected, but even an intermittent use of the methods suggested will be of some value.

The first method suggested, which has been followed more or less completely in the kindergarten of the Associate Alumnae of the Normal College, New York city, is as follows: The kindergartners aim to keep a record of each child in a separate blank book. In the room, on a hanging shelf, may be seen twenty-five of these record books. If possible, the child's photograph on entering the kindergarten is placed on the front page, followed by a brief family history. A careful description is given of the child's actions during the first days. Notes follow from day to day, or week to week, at irregular intervals, according to the time that can be given. When a child remains two or three years, the record becomes of special interest. In some instances a summary of the work accomplished by the child in weaving or sewing appears at the end of the year, or a statement of his color preferences. A few of the books are indexed, so that illustrations of certain traits may be found readily, as of anger, discouragement, theft, generosity, etc.

If it is too much work to keep a record for every child, it may be possible to keep three or four, choosing children of different temperaments as types. One of the kindergartners who has assisted in keeping these records says nothing has helped her so much. They remind one of Pestalozzi's records of the children at Stanz, and, while they may not yield material for the scientist, they help to create an interest in the individual child. The kindergartner is led to connect one act with a series of similar acts, and so to form an idea of tendencies in the child. While it is true that such impressions are formed almost unconsciously by the kindergartner in her daily intercourse with her children, it will be found that the written record will greatly strengthen this power in young teachers.

The second method that has been tried in some of our public kindergartens during the present year is as follows:

The teacher keeps a daily record of the order of exercises on the left side of a record book, and leaves the right side blank, unless she finds some items of interest to record in relation to one or more children. Even when nothing is written, the blank page is a reminder from day to day of the child. The tendency is to think of the work being done, the mat, the weaving, the blocks, the product of work, rather than the child working. We need a frequent reminder, and I say to our kindergartners, even if you write nothing, you will give a thought to the child, and perhaps wonder what you could or should have written.

A third method of child study in the kindergarten has been a careful observation of a child's drawings as suggestive of the content of his mind. For example, in one case we have found a child drawing an elaborate picture of a funeral procession. One who lived in the neighborhood and had witnessed the display made on such an occasion would not be surprised, but a teacher who had not known of the custom would certainly have had an unlooked-for peek into that child's mind.

In another case a child made a picture of a little boy running to meet his father at night as he was coming home. Quite a different state of home affairs was shown in the drawing of a boy on a chair fastened to a bed, but the boy announced he was running his tongue out and having a good time. Mistaken notions of the meaning of words are sometimes detected by free drawings.

It is in the free drawing, principally, that these opportunities come. The subjects suggested by the kindergartner may be so chosen as to help in disclosing the child's thoughts, as when the children are asked to draw "objects noticed on the way to the kindergarten," or each child is asked to draw "whatever he thinks will make a good picture," or "what we saw on our walk."

While I have particularized these three methods, I think *all methods of child study* are good for the kindergartner, and I know of no better summary of these methods than the one found in "Studies of Education," first number, by Professor Earl Barnes, *viz.* :

1. Undirected observation in everyday home and school life.
2. Miscellaneous written collections, without any hypothesis.
3. Personal reminiscences of the students.
4. Personal journals or letters of children (May *Atlantic*).
5. Reminiscent autobiographies, written or printed.
6. Artistic interpretations of childhood.
7. Direct studies of children.
8. Biographies of young children.
9. Statistical studies on the lines of a syllabus.

I especially recommend the kindergartner to study carefully her own childhood, for I believe, as Professor Barnes says, "he who sits down and carefully and honestly reconstructs from memory his own childhood, in its moments of joy and grief, has given himself a medium through which he can see children as they are." Last winter I was asked to speak on the subject "The Child's Love of Work" at the Brooklyn Congress of Fathers and Mothers. I prepared for the paper mainly by looking back into my own childhood experiences, and one after another came back to me, until I was more thoroughly aroused than ever to the value of work as a pastime. I remembered the delight I felt in helping on moving day—the pleasure in little household duties—and I fully sympathized with the choice of Queen Victoria, who was asked, when a child, by an aunt who wished especially to please her, what she would choose to do; the future queen chose "to wash the windows."

Professor Barnes says, in speaking of these reminiscent studies: "They quicken our interest in childish activity by relating it vitally to our own egoistic interest. We also see acts in their perspective and in their relations; as we cannot when observing a child."

We will not have the proper methods of child study in our kindergartens until we have them in our training classes. I can conceive of no more profitable exercise in a training class than these reminiscent studies, the teacher suggesting lines of thought by appropriate questions, as:

What is the first thing you remember?

Did you have many playmates as a child?

Who was your favorite playmate?

What were your favorite plays as a child?

Were you a leader in plays?

What were your favorite picture books? Your favorite songs?

Did you spend much of your time with adults?

What adult did you like best to be with? Why? Did you like to visit? Did you travel?

What work did you like to do about the house?

Were you fonder of older or younger children than yourself?

Were you fond of dolls? What kind, large or small? What toys did you like?

Did you have pets?

Such questions are not asked for the purpose of collecting data and classifying, but to lead the student back into his own childhood, and to awaken the feelings and interests then experienced.

It would be profitable for the training teacher to secure such individual records of children as have been mentioned, and to read them with her students, interpreting them in the light of her wider experience. She should also require each student to keep a record of at least one child.

I have said nothing about child study from the physician's standpoint. We will all agree that special attention should be given to the hygienic conditions in the kindergarten. No report on Dr. Hall's syllabus for kindergartners interested me more last summer at Clark University than Dr. Burnham's report on Section I., *viz.*, hygiene. Such questions as these were included:

What precautions are and should be taken against contagious diseases, and what essentials are neglected? If washed, do the children all have the same soap, wash-rag, sponge, towel, water, handkerchiefs, drinking cups, etc.? Are the toilet rooms near, warm, suitable, used freely, and are children properly attended, isolated, watched, taught cleanly habits there? Do they meet primary children there on going or coming?

What care is taken of eyes, ears, nose, teeth; are these medically examined or tested by the teacher?

Are drafts, direct sunshine, dark corners, overheating avoided? What is done to insure ventilation and pure air? What temperature is kept? What precautions against exposure and colds in taking off outer garments, going to and from kindergartens, etc.?

Are chairs, tables, blackboards, etc., adapted to the size of different children? Are they seated by age, size, or proficiency?

How do you try to prevent the contagion of bad habits, as mispronunciation, biting nails, picking the nose, sucking lips or fingers, making faces, stammering, swaying, and other automatic movements, and how would you treat them in the individual child?

How do you try to prevent fatigue, nervousness, excitement, and insure proper postures, and prevent over-tenderness, and over-susceptibility of mind and body, coddling, and fastidiousness?

How long do children stand, or play in ring or circle, at one time?

What proportion of the children take lunch between 9 and 12? What

do they usually bring, and how is it served and eaten, and how much time is thus consumed, and are they better or worse for this; bearing on insufficiency of breakfast, table manners?

What signs of increased nervousness or fatigue, if any, have you noticed after Christmas week?

Dr. Burnham reported that very little literature exists upon the subject, and that the returns to the questions suggested were small, but that he had come to the conclusion that the kindergarten is a very hygienic place; nevertheless, he said, "grave defects exist," and advised kindergartners to study Froebel again, for Froebel was not only a good teacher, but a real champion of hygiene. No one had given greater attention to the muscular system than Froebel. Froebel saw the dangers of nervous diseases—and desired to train up a generation of youth of better constitution. Dr. Burnham claimed that work out of doors is the core and center of Froebel's system, and advised kindergartners to do more toward developing occupations for outdoor work.

He warned us of the danger of too exciting stimuli for young children in pictures and stories, especially for those children who come from a meager environment. Hold the child's attention with the weakest stimuli possible. Of two stories choose the one less exciting. By keeping children calm and free from excitement we lead them to self-control. The cause of nervous breakdown is often lack of self-control. The self-control of the kindergarten is of great moral and hygienic value.

It would seem to be a foregone conclusion that kindergartners would observe the children in regard to cleanliness, but in large cities we have not wholly solved the problem of "the dirty child." We are yet in need of Dr. Harris' wise counsel upon this subject, namely, above all things to teach the children to keep clean and to be polite. We have been greatly aided this year in New York in this direction by the appointment of physicians to visit our schools daily.¹

The height of chairs and tables appears to be unsolved in some kindergartens. How to take care of the children's eyes is still a problem: is it best to have the light from the left? Then we must face the question: How must we place our tables to accomplish this desirable result? even though it breaks up our much-loved ring? The Baroness von Bülow said to me, in speaking of this change of the ordinary position of the kindergarten tables: "You Americans are too sentimental. You want a circle all the time. You have it in the morning at the opening talk and in the games. That is enough."

I was indeed glad to find she agreed with me, and I now suggest plac-

¹ In speaking recently of the danger of singing in dusty rooms, Dr. Wood, an eminent physician in New York city, suggested that the dust be blown out of the room by machinery, as is done in certain factories where delicate work is being done.

ing tables one behind the other, at least during occupations, for only in **this way** can we secure light from the left, and keep direct light out of the children's eyes.

The only method of child study that will secure desirable physical conditions is that of constant observation of these little things that affect the health of the child. It is surprising to find what important physical matters escape the attention of the kindergartner whose mind is on her programme and not on the child. The kindergartner, as well as other teachers, need occasionally to be reminded that we do not teach drawing, weaving, sewing, etc., but that we teach the child—the child must be uppermost in the mind; the work must be seen constantly in its relation to the child.

Young kindergartners do not always realize how they are tested. A supervisor recently visited a kindergartner who had been in charge of her class but a week. The kindergartner began almost at once to speak about the children: This little one has an invalid mother; there are eight children in the family; this little quiet one cannot speak above a whisper, it seems that she fell out of a window some time ago. Another kindergartner said: "O, how different it is to discipline the children when you know them!" It is such knowledge that makes the supervisor feel assured that the individual child is not being forgotten in the desire to have pretty work to exhibit or a programme connected in all its parts.

Another eminent writer on education said: "There are doubtless many ways in which men make a new heaven and a new earth of their dwelling places, but the simplest of all ways is through a fond discerning and individual care of each child." Such care, the result of child study, should be the aim of all true kindergartners.

THE KINDERGARTEN IN THE PUBLIC SCHOOLS.

BY SUPERINTENDENT C. B. GILBERT, NEWARK, N. J.

[ABSTRACT.]

I. The growth of the kindergarten in America was for many years very slow. Its recent development has been most rapid.

II. The cause of the slow growth was a lack of comprehension of the kindergarten on the part of the average educator, including the average kindergartner, the latter being a partial cause of the former. This period may be called the period of the nursery-maid kindergarten.

III. The recent rapid development is the fruitage of the persistent efforts of the great kindergarten leaders and of the revival of the study of

pedagogy in this country. The general introduction of the kindergarten into public schools is the greatest step in pedagogy that has ever been made in this country. It is, however, fraught with dangers both to the kindergartens and to the other schools, and necessitates considerable modification of both. The kindergarten must not be attached to the public schools as a new and distinct department, but it must be co-ordinated with them in a vital way. This means for the kindergarten:

1. Broader culture and better professional training for kindergartners.
2. A more general spirit of co-operation, and an attempt to meet real rather than imaginary conditions.
3. A broadening of the course and a gradual modification of the tools used.
4. A better training for citizenship through the enlarged comprehension of the meaning of co-operation.

IV. This means for the other schools:

1. The sweetening and mollifying of the systems of discipline, through the introduction of the kindergarten spirit.
2. A more rational and careful consideration of individual needs.
3. The introduction of a more generous and altruistic spirit into the schools.
4. A training for citizenship through the introduction of self-government.
5. A saving of time in the instruction in fundamental branches.
6. The making of education real and vital instead of formal and unreal.

KINDERGARTEN WORK AND PRINCIPLES IN THE SCHOOL.

BY MISS KATHERINE BEEBE, EVANSTON, ILL.

There have been few educational gatherings for years past where a paper bearing some such title as this of mine has not been read. You are quite accustomed to listening to the exploitation of the greatness and completeness of Froebel's theory and practice. You have heard many times, and most of you have come to believe, that Froebelian principles should be applied to the later school life of the child. You probably expect me to tell you once more what these principles are, and to urge their wider knowledge and subsequent application upon you. I ought to speak to you of the physical, mental, and moral aspects of the play; of creative activity, individual development, incipient manual training, the

sociology of the kindergarten, its power as a preventive force, its plan for normal and logical development of those faculties most used in the school life, actual and ideal. I shall be sorry if I disappoint you in not placing before you any of those things which my subject gives you the right to anticipate, but ever since I was asked to take part in this meeting I have been promising myself the pleasure of telling you, in a friendly and informal way, how some of these principles have been applied in one particular school, "the one I know best of all."

Please bear in mind that I do not claim these principles as the exclusive property of the kindergarten; for no one knows better than we kindergartners do how universal they are, how fundamental, and how absolutely a part of all that is or has been good in educational processes from the beginning. We do claim, however, that Froebel organized, systematized, and arranged them most wonderfully for the education of little children; that in the kindergarten they have been used and proved, and that it has been our privilege and pleasure at least to pass some of our good things occasionally on to the school. Many new and good things in education which to kindergartners have long been familiar in their essence have been evolved without any apparent help from the kindergarten, and many direct gifts from the kindergarten to the school have not been recognized as coming from that source. It is not at all necessary that they should be. That the vital principles of education should prevail in both kindergarten and school is the main thing, and that in which we all rejoice.

How much of what I shall tell you of the work of our little school is the result of any kindergarten influence I do not know or care. I only know that from the newest five-year-old to the oldest sixth-grader we are all good friends, members of one family, and working along the same lines.

I shall have to apologize to some of you for having previously stolen part of my own thunder. When Miss Haven gave me a place upon her programme, I welcomed the opportunity to pass on to my fellow-teachers the story of this past winter's experiment in using our school as a social center, and made many preparations accordingly. Subsequently our county superintendent, Mr. Bright, asked me to tell the same story to his teachers in Chicago, assuring me that it would make no difference to the audience I expected to address in July. This story was printed in a pamphlet used at the meeting of the Northern Illinois Teachers' Association on April 22, 23, and 24, and it is to those present on that occasion and at the Chicago meeting who may hear me today that I offer this explanation of what may be repetition to them.

Some of the kindergartners have long had an idea that our occupations, which are so good in themselves, in that they hold for the child

the degree of development claimed for them by Froebel and proved by his followers, might be used to advantage in primary rooms. It is true that they already have been largely used as busy-work, or seat-work, but they deserve a place by themselves, if it is true that hand work should be a part of a pupil's education from the beginning. Long before he can enter a manual training school—before sloyd, sewing, cooking, and the like, are practicable in the average school—these “schools of work,” as they are called, could be used. There are beautifully arranged series of lessons in sewing, weaving, folding, cutting, pasting, and color work, which older children could do as thoroughly and well as the training-class students, and which would yield them the same delight and development which they bring to kindergarten children.

In two of our Evanston schools the teachers in the first and second grades have been doing this kind of work. In some rooms it is given once a week, in others oftener; but it has its own place on the programme, and is done under the teacher's immediate supervision. The first experiment was with a set of furniture, developed from the square folding papers, which includes chairs, tables, bed, bureau, washstand, cradle, sofa, brackets, clock, and other articles, the making of which brought great pleasure and profit to the little folks, who each completed a set, to be taken home as a plaything or given away for a present. We used papers cut 8×8 for this, and any quantity of lessons in attention, form, number, position, direction, accuracy, neatness, and invention were given, some by the teacher, others by the work itself. We hope to go on with this next year in the first and second grades of our six schools, and arrangements have been made for instruction in the technique of the work for those teachers who wish to put the kindergarten principle of creative activity into their schoolrooms in this particular way.

Our own little one-story school of eight rooms has many advantages in its location and surroundings. It is in a suburban city, where there are not only trees, grass, flowers, and open prairies, but where there are also a settled home feeling and a community spirit often absent in large cities and towns, and not always strong enough to be felt even in country places. We love our city and are proud of it. We do not move very much, and we live in the same houses and teach in the same rooms long enough to know and be known. Hence, when we want flowers, plants, seeds, books, pictures, specimens, or anything else for school purposes, we have only to ask for it. Often we need not even ask, for the homes voluntarily lend, send, and give much to the school. This relation is one which has always been a part of the ideal kindergarten, and should be a part of the ideal school.

There is among us an *esprit de corps*, a pulling together, a working together, a living together, which are the essence of kindergarten life. It

is a little hard to put so intangible a thing down in words, but you would have seen it and felt it could you have been with us before school time in the morning of the Friday before Memorial Day, which was the day of the school celebration. Dozens of children were darting to and fro with vases and glasses of water, everybody was bringing flowers, some were dusting and tidying up here and there, boys were helping the janitor put up flags and bunting, halls and reception room were being put in festal array, and every room was being made as attractive as possible. Everywhere was the suppressed excitement of a gala day, so dear to the childish heart, beaming smiles, and frequent exclamations of "Oh, *doesn't* it look pretty!" Probably the same sort of thing was going on at the same time in many other schools, and if in them there was the same sweet, helpful, friendly, family spirit which fairly made the air vibrate that sunny morning, I am very glad.

There is not a morning when from ten to twenty of our children do not come in with offers of help in the necessary school housekeeping. They are as efficient as willing, in most cases, and have asked for and obtained permission so often to do certain kinds of work that their doing it is now largely taken for granted. We really have a very flourishing domestic science department in operation, whose sessions are held "between times," and where the attendance is purely voluntary.

We have put our little ones in the care of the older ones, and most beautifully have they responded to the trust. Where in times past the monitor stood in the dressing room only to report and spy out delinquencies, to his own and his victims' undoing, today a number, chosen from an army of aspirants, are sent among the marching lines and into the dressing rooms *to help*. They show the new children how to keep step; they keep the lines straight, put on rubbers, help with wraps, find lost hats, button up little coats, and do numberless other offices of a brotherly and sisterly nature. They extend their offices to the playground, and see that justice, fair play, care, and protection are given where they are needed.

This family feeling within the school, and the neighborly feeling without, have finally crystallized into an experimental organization of the forces at work, which promises so well that the story of it seems worth the telling, if only that those interested may watch its progress, success or failure.

With our school as a center, there exists today a reading room, gymnasium, two boys' clubs, sewing classes, and a woman's club, with a military company and a workshop in the near future. All of this arose in a most simple and natural way from small beginnings, and has been a matter of growth rather than innovation.

The school, being situated at the west end of a residence town, includes

among its pupils children from families in comfortable, and even affluent, circumstances, and also those of the working people, the latter class predominating. Several of the teachers have been in the school so long that they are necessarily very well acquainted with the families whose children attend from year to year. Much visiting among them has given to these teachers an intimate knowledge of circumstances and characteristics, and, as a natural consequence, a sympathetic and friendly interest in their welfare.

It was ascertained that many of the people, through lack of work, lack of thrift, because of illness, bereavement, or other stress of circumstances, had great difficulty in clothing their children warmly or comfortably for school. This led to a request of the well-to-do portion of the school district and town for cast-off or outgrown clothing, which has been so generously responded to for several years that there is in the storeroom, during the whole school year, a supply of clothing on which teachers can draw according to individual necessities.

There is more than the one reason given in the idea of paying specific attention to the clothing of the children. Of course, it is primarily necessary that they should be enabled to attend school and be protected from cold and exposure, but it has been deemed important that a child's self-respect should not be injured by being obliged to appear among his well-dressed mates in ragged, dirty, or grotesque clothing. It is the endeavor of those interested to make any such condition so distasteful that every effort will be made to avoid it. Many a forlorn and discouraged child, who keenly felt the difference between himself and the other children, has been cheered, helped, and stimulated by his teacher's interest in his personal appearance and her assistance as given from friend to friend.

This supplying of clothing is done as quietly as possible, but when the secret leaks out, as it is often bound to do among the children, the fact that "the teacher" gave the clothing seems very different from a giving by an organized or recognized charity.

The children are, as far as possible, encouraged to make some return for what they receive. Personal cleanliness is insisted on, work is given them in and about the schoolhouse, and they are often helped to mend or make over the garments given them.

While the House and Home Club has no official connection with the school, the interests of the two are so closely allied that it is in reality a part of it. This club is composed of about forty women, who either work themselves or are the wives of laboring men, all of whom live in the school district. It was organized by one of the "other class" of mothers, whose own children attend the school. The club has met at her house weekly for over a year, and, while it is self-governing, her friendly help

and interest, as well as that of her husband, is always at hand. Neighbors and teachers are also members of this club, and the fraternal feeling existing among them was happily visible at the Christmas party given last year, when the club entertained husbands and children. The entertainment consisted largely of songs and recitations by the little folks, most of whom belong to the school in question, though Catholic and Lutheran parochial schools were also represented.

A chorus from the sixth grade was present on this occasion, and, seated on the stairway, sang for the company their repertory of Christmas carols, which had been put into their possession by means of the excellent musical training of which the Evanston public schools are justly proud.

The members of this club, on one occasion, when the teachers' outside work for the children was under discussion, expressed a wish that they might, in some way, have a hand in it. It was suggested that they form themselves into a sewing society, to meet in the kindergarten room on Friday afternoons, for the purpose of making over and mending the clothing then on hand. This was done without loss of time, and in the course of a few weeks the garments, which, of course, arrived in all sorts of conditions, were sorted, mended, or transformed ready for use. From the accumulation such clothing as was suitable for the school children was first laid aside; from that which was left the women who did the sewing were allowed to take anything which met any of their individual needs, and they availed themselves of this privilege with alacrity. From the remainder they were asked to carry away and give to neighbors, friends, or relatives such articles as they could so place to advantage, thus enlarging the circumference of the circle. They were very glad to do this, as each one knew some one whom she wished to help, and the pleasure they must have had in carrying to those in need of such aid a mended dress, coat, or undergarment can well be imagined. Whatever is left after these three needs have been supplied is sent to a colored woman in the district, for distribution among her people.

To teach the girls of the working people's families to sew, mend, and make over seemed a necessary work, if present conditions are to be improved, and, therefore, sewing classes have been formed among the school children, which meet after school hours in small groups in charge of a teacher or interested neighbor.

When the first of these classes was organized in the third-grade room, after the nature of the work had been explained, the question was asked, "How many girls would like to join this class?" Most of the girls, and one bright-faced boy, raised their hands.

"I said *girls!*" said the teacher, smiling. "How many *girls* would like to join the sewing class?"

Again there was the same result, the boy looking straight at the teacher with his own sunny smile and the light of a steady purpose in his brown eyes. The teacher took the hint.

"How many boys would like to join, too?" she asked. Fourteen boys promptly responded, and from that moment all sewing classes were open to both sexes.

The principal of this school, from whose entire and wise devotion to the interests of the children in her care comes the inspiration which vitalizes this whole movement, found that about fifty of the schoolboys were running about the streets at night, doing nothing, or worse, partly because homes in many cases were unattractive, and partly because of the innate and natural desire of boys to flock together. It was she who proposed opening the school building at night for a boy's club, and she called to her aid her teachers, the parents of the district, interested neighbors, and social settlement workers. She met with such enthusiastic support from all of these that the first steps were taken almost immediately.

A few of the most interested conferred with the school board regarding the opening, heating, lighting, and general care of the schoolhouse. The members of the board then present stated that it had always been their policy not to allow their school building to be used for other than educational purposes, regarding the property as a public trust to be conserved in the best possible condition for the succeeding generation of children. They had often been obliged to refuse requests for the use of buildings to political and religious organizations for this reason. The use of the schoolhouse proposed by the petitioners, however, they regarded as educational in the truest and highest sense of the word, and, therefore, they not only granted the use of the building, but the necessary lighting apparatus, and assumed the expense of the additional janitor service necessary.

After this was settled, a meeting was called of all those interested, and a simple organization was formed, consisting of a controlling council of eight, and active and honorary members, the whole to be known as the Wesley Avenue School Club Association. On the council are four women and four men; the principal of the school, one mother, an experienced and enthusiastic social settlement worker, the kindergarten teacher, the superintendent of schools, two fathers, and another enthusiastic social settlement worker. The honorary members are those who wish to contribute money, the active those who become members by virtue of service volunteered. Many are both honorary and active members, and, as the membership list was a full one, the council in a very short time found itself in possession of sufficient money and helpers to begin work.

The kindergarten room, with its piano, pictures, and open space,

became the central point of action. Books and magazines sufficient for a small library were contributed, a library committee placed in charge, tables and chairs purchased, and the room opened between the afternoon hours of half-past three and half-past five for the children who wish to read, draw, study, or do other quiet indoor work. Through the kind offices of one of the district fathers an almost full set of the bound volumes of *St. Nicholas* became the library's most valued possession. The children are not encouraged to remain indoors during pleasant weather, except for very special reasons, but during the long, cold winter they seemed to find the reading room most attractive.

A good supply of gymnastic apparatus was purchased and placed in the wide hall for use in the evenings by the boys' clubs. A number of men interested and proficient in gymnasium work volunteered as instructors, and, with the wildest enthusiasm on the part of the boys, the building was open from seven until nine o'clock four evenings a week.

It soon became necessary to divide the boys into two sections, as the number of applicants for admission ranged towards eighty. Section A uses the gymnasium on Mondays and Thursdays, while Section B either looks on or plays games in the kindergarten room. On Tuesdays and Fridays Section B changes places with Section A. At eight o'clock the bell rings, and games and apparatus are put away by the boys. The reading room and the more quiet games and the business meetings of the boys' clubs take up the rest of the meeting.

An occasional entertainment for the boys is part of the plan, and they have already had an interesting "chalk talk" given them by one of the neighbors. The fifth and sixth grades, assisted by the music teacher, gave, on another occasion, a concert to their neighbors and friends.

A plan is afoot for the forming of a military company, to be drilled by a "real soldier" from Fort Sheridan, and a professor of manual training in the Chicago schools has offered his services as soon as benches and tools can be purchased.

The whole movement is as yet in the experimental stage, but the responses to the requests for money and helpers have been so prompt and generous, the enthusiasm for and interest in the work so general, and the delight of the children so manifest, that the organizers are full of hope and courage.

The objects of the Wesley Avenue School Club are many. It aims to gratify the boys' natural desire for each other's company, to furnish them with opportunities for rational and healthful amusement, to guide and direct the children's reading, to influence character for good, to improve manners and to encourage self-government, self-control, helpfulness, and unselfishness.

Already demands for larger scope in the work are making themselves

felt. The girls want a chance at the gymnasium, some of the pupils want special drawing lessons, some mothers and housekeepers are talking of a Saturday cooking school in the basement, one teacher wonders why there may not be a vacation school during the summer, other teachers are asking why all schools should not be social centers of some sort.

These, and many other things, are possibilities of the future, but it is the policy of the council to feel its way slowly, to let the work *grow*, to wait for demand before offering supply, and to test the work at all points by the results on the behavior, minds, and characters of the children whom it seeks to benefit.

Since this account of our work was written the military company has become a reality, and a penny savings bank established. Our garden this year is going to be as great a delight to neighbors and passers-by during July and August as it will be to us when we come back in September, and as it was to the workers in it during April, May, and June. We planted late on purpose, so that many flowers will be blooming in the fall. We have large grounds, and there was much work to be done before this result could be obtained. Our boys did the cleaning-up with rakes, spades, and little wagons, and the building of a new division fence made this work more arduous and necessary than usual. The children brought in wheelbarrows and wagons fresh black earth from the prairie for the flower beds. The kindergarten children did most of the seed and root planting, the girls most of the transplanting and setting-out of young plants, and all took a hand in the weeding. The half hour before school hours and the half hour after provided the necessary time. The janitor, who, of course, mows the lawns and waters with the hose, was always ready to lend a hand, and among us we did really a great deal of work with a slight expenditure of time, muscle, and money, simply because we worked together for "our garden."

A few of our projects for the vacation days may interest some of you. Some of our teachers will be in Evanston during the summer, and to them will be loaned at intervals certain horses, carriages, and coachmen, for the purpose of giving an outing to hard-worked mothers, fretful babies, and delicate children.

There will be sundry informal little picnics and lunches on the prairie (the ice cream is already promised), and some bathing parties on the lakeshore, which some of the children rarely see, owing to its distance from their homes and lack of time to take them thither on the part of the mothers, and lack of inclination on the part of the fathers. One teamster and a grocer, who owns a large wagon, stand ready on demand to take "the teacher" whenever she wants to go.

The odds and ends of kindergarten material left over after the cupboards were cleaned were given to kindergarten graduates of twelve and

thirteen years of age, and there will be, in consequence, many little play kindergartens under the trees this summer. Some of these, I understand, are to be free, others not. One young woman says she means to charge the parents ten cents a month.

Half a dozen big girls are going to form reading classes for the younger children in their half a dozen selected (not select) neighborhoods. About four or five o'clock, when most children are, or ought to be, washed up for supper time, they are to go to the big girl to hear a story read. The books will be furnished her by one of the teachers, and a philanthropist has been found who is going to pay the big girl a penny a week for each child she secures for her class up to ten. After she has ten pupils, the candidate for admission or his parents will have to stand the expense. It is hoped that in this way the love of "playing school" so common among children may be turned to account. The big girls have been chosen from those who are natural teachers and fairly good readers. Whether this experiment will prove a success or not of course remains to be seen. I only speak of it as one of the ways in which teachers, pupils, neighbors, and friends may work together for the time when every school shall be a social center, every home a social settlement, and every parent and teacher a settlement worker.

DEPARTMENT OF ELEMENTARY EDUCATION.

SECRETARY'S MINUTES.

FIRST SESSION.—THURSDAY, JULY 8, 1897.

The department was called to order in the Grand Avenue M. E. Church at 3 P. M. by the President, Miss Sarah C. Brooks, St. Paul, Minn.

In opening the meeting, the President made a brief statement regarding the nature of the programme to be presented at both sessions of the department.

The first paper, on the subject "What to Teach and What to Leave Out," was read by Wm. M. Giffip, of the Chicago Normal School. Discussion followed, led by Miss Flora J. Cook, of the Chicago Normal School.

The next paper was presented by Frank H. Hall, Superintendent of Schools, Waukegan, Ill., on "Imagination in Arithmetic." Discussion was led by Newell D. Gilbert, Superintendent of Schools, Austin, Ill.

The Committee on Nominations was appointed as follows :

W. W. Speer, Chicago, Ill.

Adelbert Bugbee, Buffalo, N. Y.

Miss Mary Hall, Milwaukee, Wis.

SECOND SESSION.—FRIDAY, JULY 9.

The department was called to order by the President.

"The New Arithmetic" was the subject of a paper prepared by the late John H. Tear, formerly Principal of the Washington School, Chicago, and presented and discussed by Henry C. Cox, Froebel School, Chicago.

L. W. Colwell, Principal of the Linne School, Chicago, read a paper on "Elementary Mathematics and Education." The paper was discussed by W. H. Skinner, Superintendent of Schools, Nebraska City, Neb.

The Committee on Nominations reported the following for officers for the ensuing year :

For President, William N. Hailmann, Washington, D. C.

For Vice-President, R. H. Halsey, Binghamton, N. Y.

For Secretary, Miss Harriet E. Smith, Milwaukee, Wis.

The report was accepted, and the officers declared duly elected.

The department then adjourned.

IDA C. BENDER,
Secretary.

PAPERS AND DISCUSSIONS.

OPENING ADDRESS.

BY SARAH C. BROOKS, ST. PAUL, MINN., PRESIDENT OF THE DEPARTMENT.

Every method employed in elementary instruction, to be accounted pedagogically correct, must fulfill at least two conditions: First, it should correspond in its development to the mental development of children, thereby allowing a natural order, and thus arousing spontaneous activities and interests; second, its results in mental development should be commensurate with the time and effort expended by teacher and pupils.

Applied to present generally prevailing methods of teaching number, these tests prove beyond question their failure to meet the standard requirements. In fact, experts freely declare that, in some respects, these methods have little to commend them over the old custom of leaving the matter of number development to chance until the second or third year of school life, when the child was supposed to be able to master the contents of a text-book in elementary arithmetic. It was from thorough conviction of the foolishness of this custom that teachers ten or fifteen years ago accepted with enthusiasm a method which seemed correct in logical development, and at the same time afforded free use of concrete material in development of the number idea. Of late years, however, attention has been turned from the sole consideration of matter to be presented to a study of the child. One conviction arising from this study is that no method can be effective which is not based upon the natural order of mental development. The growth of the kindergarten has likewise contributed to a clearer insight of this as of other kindred matters. Passing from the primary to more advanced grades, the introduction of additional subject-matter into the course of study through the influence of recent pedagogical activity has created a general demand for a rearrangement of topics in arithmetic, in order that time may be saved and the best work be done by dispensing with all matter not essential to a perfect development of the subject.

From existing indications the times are ripe for a general readjustment of arithmetical method and subject-matter. It is, therefore, safe for us to turn our faces toward the light and ask: "How much is correct in what is now being done? Where is the existing evil? What shall be adopted to fill the place of that which is to be omitted?" From two or three centers of interest, within a limited territory, a few students have been selected to answer these questions. In view of the valuable services

already contributed by these diligent seekers after truth and their collaborators, the officers of the Elementary Section feel that no apology is needed for the limited territory which they represent.

WHAT TO TEACH AND WHAT TO LEAVE OUT.

BY WM. M. GIFFIN, CHICAGO NORMAL SCHOOL.

I desire to preface much that I have to say by acknowledging my obligation to what is known as the arithmetic creed prepared by the superintendent of schools and the teachers in the suburban districts of Cook county.

I shall not discuss the question in the order of the title, but trust that when I have finished reading you will have no doubt as to where I stand on the question: "Nothing should be taught to a child, that is, no operation should be given him, that cannot be performed with numbers of things." Some of you will recognize at once that this will necessitate having five rather than four fundamental operations, because, if we give a child twelve objects, and ask him to find how many four objects there are in the twelve, he will at once divide the numbers into a number of equal numbers, and his answer or quotient will be equal to his dividend. If next we give the child these twelve objects and ask him to find one-fourth of them, in quite a different way, he proceeds to do so; hence it is certainly very confusing to him if we call this operation by the same name as the first one performed. In this case (though he may not be able to say how) he knows he divides the number into a number of equal parts in order to find the number in one part. He also knows that he begins with an entirely different condition of things. He will recognize that in the first case the thing to be divided and the number of equal things into which it is to be divided have the same name, and in the second case they have not. How much more logical to teach the operation in division in such a way as to make it possible for him to do the same work when reaching fractions! He is made to see that in division the dividend and the divisor have the same name. We ask him how many pounds of sugar can be bought with \$2, at 5 cents per pound; he at once changes his \$2 to 200 cents and says, "As many pounds as there are 5 cents in 200 cents, or 40." Again, if I have 2 pounds of tooth powder and desire to put it in 3-ounce bottles, how many bottles must I buy? He will know that he must change his 2 pounds to 24 ounces (apothecaries' weight), and then says, "As many bottles as there are 3 ounces in 24 ounces, or 8." If we ask him how many pounds of tea can be bought with $\frac{1}{2}$ of a

dollar at $\frac{1}{4}$ of a dollar a pound, he will recognize at once that his dividend and divisor have not the same name as they should have. He then proceeds to change them, and then says, "As many pounds as there are $\frac{2}{3}$ dollars in $\frac{2}{3}$ dollars, or 3."

The creed also holds that the subjects to be taught in arithmetic, the terms to be used, and the processes to be employed should be determined from the standpoint of the child, and not from the standpoint of the educated adult. The trouble with the average teacher is that he does not get down to the child, and unless he does get right down on a level with him, and presents conditions for the child to discover step by step what he himself has discovered, until he reaches the height where the teacher now stands, and, as he should, goes beyond that, he (the teacher) will be a failure. Too many, instead of doing this, instead of getting right down to the child, stand on their pedestal and grasp the child almost literally by the nape of his neck and pull him up to their own height, look him in the face, and say: "Now, my boy, here is where you are to begin: remember that the square of the hypotenuse of a right triangle is equal to the sum of the squares on the other two sides. Learn the rule, go to your seat, and work the sums."

In determining what should be taught in arithmetic, we should be able to show that any topic is disciplinary or practical. As to this word practical, anything is practical that is necessary to the child for the better understanding of what he is doing, and I have no hesitancy in saying that that which is practical is also disciplinary. Too often teachers have an idea that the word practical has reference to a business transaction only, and for this reason teach any subject found in arithmetic that has to do with business life. Take, for example, the subjects of foreign and domestic exchange. Not long ago I was working in an institute held in one of the largest cities of one of the largest states of the Union, and, when asked to name some things that I would not teach a child, I proceeded to name foreign and domestic exchange. This, of course, as I expected it would be, was the cause of an animated discussion. Fortunately for me, perhaps, the bell for the noon recess sounded. There was a young man seated in one of the front seats. I called him to me and asked him if he were acquainted in the city. He was. I invited him to take a walk with me. When we were out on the street I asked him which was the largest bank in town. He said, "The First National." I asked him if he were acquainted with any officers there. He said he was; and then, going to the bank, he introduced me to the cashier, whom I told what I was doing, and asked if I might put a few questions to him that I thought might be of interest to the teachers of the state or county. He, like all other men in his position, was very glad to give me any information that he could. I then asked him if he studied foreign and

domestic exchange when a boy at school. He smiled and said that he did. I asked him if he applied the rules as learned there in his present position, and to this, with an "audible smile," he said: "I have been cashier in this bank for ten years, and have never yet had occasion to use foreign exchange." Think then, fellow-teachers, of the thousands of twelve-year-old boys who are kept in after school, when the skating is good, or when baseball is at its height, because this great financial question has not been mastered—a question which this cashier, in one of the largest banks in one of the largest cities in one of the largest states in this country had never had occasion to use!

If a boy is preparing for a business life and feels that it is necessary for him to have a knowledge of stocks, bonds, and foreign exchange, there are special schools that will prepare him in these lines. Let the public schools so train, not stuff, the mind that it will ever be able to take up any of the affairs of life, when called upon to do so. In short, prepare the mind to be able to draw an inference rather than to be able to recall a rule. Teach no part of arithmetic mechanically. Hence, teach no subject till the child is ready to grasp it.

The creed condemns the giving of work in arithmetic under the name of "examples" for which conditions stated in problems cannot be made; for instance, complicated examples in complex and compound fractions.

The creed states that operations in arithmetic which have become obsolete, or have never existed elsewhere in the world, should become obsolete in the schoolroom. This will throw out such subjects as greatest common divisor, cancellation (as such), circulating decimals, compound denominate numbers. How inspiring, by the way, for a child to find out that there are 384,756,567,897 inches in a given number of miles, furlongs, rods, yards, and feet! The time wasted on such nonsense is sufficient to give all the arithmetic necessary to a grammar-school boy; and yet thousands of them leave school with scarcely any knowledge of arithmetic, other than the fundamental operations and a limited amount of mensuration, the most beautiful part of arithmetic, usually found in the appendix of the text-books and devoted to the last weeks of the last grade of the school. We would throw out miscellaneous measures; reduction of denominate numbers, ascending and descending; reduction of denominate fractions, ditto; duodecimals (do oh let us leave them alone!); compound interest; partial payments; Vermont rule, unless we live in Vermont; stocks; life insurance; equation of payments; averaging of accounts; arbitration of exchange; alligation, *alias* robbing, cheating, and defrauding your neighbor; annuities; all of which have been taken from the table of contents of an arithmetic used in many of the large cities of our country.

In all the grades the comparison of numbers should be a feature of

the work — the part one number is or equals of another ; the per cent. one number is or equals of another ; the ratio of one number to another. Both the teacher and the pupil are thus made to see the truth from all sides, to turn it over, to reproduce it in more than one shape, and to see it in more than one aspect.

In each subject — *i. e.*, lines, area, volume, bulk, weight, time, and values — lead the pupils to discover that they are repeating given units — in lines, a linear unit ; in area, a square unit ; in volume, a cubic unit, etc.

In percentage discard all superfluous terms, rules, formulas, and subdivisions ; present conditions making it possible for the pupils to discover the relations of the part of a number to its per cent. The first lessons in each subject must be oral and from the standpoint of the child.

Use the different modes of expression whenever it is possible to do so. The using of one will frequently suggest the using of another.

The teacher should keep in mind the fact that "number is an exact mode of limiting single things, lines, areas, volume, bulk, force, weight, time, and commercial values by units or exact standards," and should present conditions making it necessary for the child to exercise his judgment in these directions.

When dealing with an object, the child's *estimate* of its length, area, volume, bulk, etc., should first be obtained, after which the exact measurement may be given. The value of such exercises cannot be too much emphasized.

A number should be so presented, that is, when applying it, the teacher should so use it to enhance the work in hand, that a child will necessarily see it (*a*) divided into a number of equal numbers (division) ; (*b*) into a number of equal parts, to find the number in one part (partition) ; (*c*) into any two numbers, one of which is to be known (subtraction) ; (*d*) also to see any number of numbers that united will equal it (addition) ; (*e*) the equal numbers that united will equal it (multiplication). Have it compared with any number greater or less than itself. "The more the mind is exercised in numbering, the less drill is necessary."

The metric system of weights and measures should be taught with the old method as often as possible in the grades, but independently, *i. e.*, the meter as a meter and yard as a yard, each as a unit by itself.

Too little attention is paid to the study of form. The idea of the sphere, the cylinder, the cube, and the different kinds of angles may be taught through the study of the trees and the different kinds of seeds, which the children have collected, in such a way as to enlarge the image which the pupils already have. There is no better time in the year for the children to observe the different trees which they have been studying than the winter months, for answers to the following questions : The trunks of which trees form the most acute angles with their branches ?

Which form the largest acute angles? Which most nearly form right angles? Are there any that may be said to form obtuse angles?

Embrace the opportunities that are constantly presenting themselves which make the child feel the necessity for number. When any opportunities occur that require a process unknown to the child, stop right then and there to teach the process, and do it so thoroughly as to fix it for all time. For example, some question may arise that will require the finding of the difference between 248 and $199\frac{3}{4}$. A child does not know to proceed to get this difference. Nothing remains for the teacher then but to present conditions that will make it possible for the child to discover how to proceed. No matter what the subject may have been, it is to give place to the number, *until the process has been thoroughly mastered.*

DISCUSSION.

FLORA J. COOKE, Chicago Normal School.—My discussion must necessarily be confined to the place of number in the primary work. I shall take the positive side. Dr. Giffin says: "No operation in number should be given to children which cannot be performed with a number of things." He hints what those things should be, but he does not say directly that number should be used only when its purpose is to make some educative image clearer.

The children are constantly imaging, comparing, and analyzing; number element comes consciously or unconsciously into all their work. For instance, in the science work they measure, weigh, and compare the quantities which they use in their experiments. They construct charts, estimate amounts, and keep daily records concerning the sunshine, temperature, wind, and rain. In the making of apparatus, useful articles for home and school, the Christmas work and valentines, the models of primitive shelters, tools, etc., the children acquire through actual use standards of judgment, units of measurement, as the foot, pound, square inch, etc., in lines, weight, area, volume, and time.

The children's own needs, and with the desire to secure systematically their best efforts, continually present difficulties in the form of new processes and facts which must be overcome before the desired images can be made clear. This, it seems to me, is the true place for drill, as much or as little as the children may demand to help them to overcome the obstacles.

Interest in the work and the feeling of necessity to attain the end desired secure economy of effort and the least possible amount of drill. The skill and power gained in making one article are usually directly applied in making another and more difficult piece of work.

Each child plans his work for himself, after which the children select from all the plans the best and most convenient one for a guide in actual making. If the necessity for the article is felt sufficiently to secure good effort, the criticism upon the work should be entirely as to its fitness for the purpose for which it is intended, and the child himself sees the necessity for most careful and accurate work.

Thus, during the first year, a class may easily practically master the facts within the number twelve, including the whole numbers and fractions in addition, subtraction, multiplication, and division. They are, however, in no sense limited by the number twelve.

The end to be acquired, an end for which the children feel an immediate necessity, alone determines what process and facts shall be taught, and how large the numbers used shall be.

The test of the value of such an outline of work as Dr. Giffin has suggested can scarcely be estimated in per cents.

It is the hypothesis of the school that arithmetic is measuring; that measuring is absolutely essential to all mental processes; in other words, that there can be no real educative progress without the use of arithmetic; that such problems arise constantly in science, history, geography, and manual training; that, if the pupils have plenty of work in these subjects adapted to their needs, they will acquire the essential facts in number, and know how to add, subtract, multiply, and divide.

In my experience as a teacher in first grade I can say that I think the opportunities are sufficient to master all the elements in number.

IMAGINATION IN ARITHMETIC.

BY FRANK H. HALL, SUPERINTENDENT OF SCHOOLS, WAUKEGAN, ILL.

"Sense-perceptions are the elements of soul life." They are the beginnings of soul activity. They give primal ideas.

The reproduction of primal ideas, in the absence of sense-objects, is *imaging*: Imaging gives representative ideas, or images.

The separating, rearranging, recombining, magnifying, or diminishing of images is *image*-ination — imagination.

Imaging (as the word is used in this paper) is producing in consciousness copies of absent objects. Imagination is such building with, or rearranging of, these copies as shall give that which is new, at least to the mind in which they exist.

Imaging is seeing with the mind's eye that which has once been an object of sense-perception. Imagination is seeing with the mind's eye that which has never been, often that which can never be, an object of sense-perception.

"It may seem at first thought," says D. J. Hill, "that no department of knowledge is less indebted to imagination, or less connected with its exercise, than mathematics. Reflection, however, shows that it is quite otherwise." Arithmetic deals with the relations of magnitudes. Number itself is, primarily, ratio; and every ratio involves two measured magnitudes. The number of magnitudes that can be compared is infinite; the number that can be compared by means of actual immediate sense-perception must, of necessity, be limited to such as can be presented to the senses *in pairs*. Since this can be accomplished with but few magnitudes, by far the larger part of arithmetical work must be performed in the absence of the sense-magnitudes to be considered. Moreover, of the many ideal magnitudes considered by the student of mathematics few are

images; the many are, and must forever continue to be, the products of what Dr. Dewey has called the mechanical imagination. Hence imaginative activity is a *sine qua non* to progress beyond the simplest beginnings of arithmetical effort.

There was a time within the memory of many of us when "object teaching," especially with reference to number, was carried to a very harmful extreme. This practice grew out of a very commendable desire on the part of certain leaders of educational thought to impress upon the teachers the fact that all knowledge has its beginning in sense-perception, and the omission by these leaders to impress the equally important fact that it does not end there. It is hardly an exaggeration to say that, in those days of color lessons, form lessons, and toothpicks, teachers might have been found who fully believed that the first two years of child life in school were for the development of sense-perception, the second two years for the development of the power of representation, and the third two for the development of the elaborative faculty. In those early days pupils might have been found in the fourth, and even in the fifth, grade who were engaged in obtaining a perception of the fact that six sevens are forty-two, by making six seven-mark groups and counting the marks!

It was said that in one of those schools the first-grade pupils found the half of three by an actual division of toothpicks; the second-year pupils found the half of five in the same manner; the third-year pupils, the half of seven, and the fourth-year pupils, the half of nine. Whether this process of developing the perceptive power of the pupil was continued into the eighth grade "deponent saith not." If so, the eighth-grade pupils were undoubtedly led to perceive that the half of seventeen is eight and one-half. But, leaving school at the close of the eighth-grade work, when and how shall the pupil learn that the half of nineteen is nine and one-half? How far, pray, in his mental peregrinations must he go on toothpick crutches? How long must he be tied down to the things of sense and to actual material measurements?

It is customary in all good schools to acquaint the pupil with one kind of volumetric knowledge by means of a pint measure, a quart measure, and dry sand. But the leading of the pupil to perceive the fundamental facts of this kind of volume measurement is only the merest beginning of what is required. If he shall become skillful, and thoughtful, and active in this kind of effort, he must be led to image the pint and the quart. This kind of training should be begun as soon as he clearly sees the relation between any two units of measurement, and will occupy ten-fold more time—possibly a hundred fold more—than will the mere perception of the relation of the two magnitudes. Practically the first great struggle comes, in elementary instruction in arithmetic, not so much in

seeing relations, important as that may be, but in imaging magnitudes. There is not a second-grade pupil in the schools of Wisconsin who, with the diagrams before him, will say that a one-inch square is one-half of a two-inch square. Why do eighth-grade pupils in Illinois, working without diagrams, sometimes say this? Not because they are unable to see the relation, but because they cannot—do not—image the magnitudes. The relation is easy of apprehension. The mental production of the magnitudes to be compared is the difficult thing.

A comparison of two objects of sense, as a one-inch cube and a two-inch cube, is a necessary first step; the drawing of these and the comparing of the magnitudes of which the drawings are symbols are excellent, but only as preparation for the second step, which is equally important and vastly more difficult, namely, such clear imaging of these objects of sense as will make the objects themselves and the drawings, too, entirely unnecessary in the thought process. In many instances the chief cause of unsatisfactory results in mathematical training is failure to recognize the importance of this second step. Before much real progress can be made, the spoken or the written word must bring instantly into the consciousness of the pupil the image of the magnitude for which the word stands. The pupil must begin to acquire this image-making power as soon as he begins to think about magnitudes. Training in this important work must be given through the frequent use of the verbal symbol both by the teacher and by the pupil, while the magnitude itself is not an object of sense-perception.

The skillful teacher in elementary arithmetic will anxiously observe the words and actions of his pupils for evidence of the image-making power. The question, "A one-half inch square is contained how many times in a one-inch square?" will be stated at first with long, long pause after the words "one-half inch square." This, that there may be sufficient time for the pupil to do the necessary imaging. Such questions may sometimes be repeated many times with emphasis upon the verbal symbols of the magnitude to be compared, without violation of the rules of sound pedagogic practice. The child must learn to image magnitude. To do this he must image magnitude. Each pupil must do this. The teacher must give attention to individual pupils, and must wait and watch for signs of this power. The teacher must not suffer himself to be deceived. Pupils frequently offer the results of pure word memory when asked to give the relation of imaged magnitudes. This false witness must be ruled out of court. The evidence must be sifted. The teacher must not rest until there is unquestioned testimony to the power of each child to image magnitudes which are not present to the senses. The teacher must give this phase of the training early, frequent, and constant attention. More by far of the failure in the teaching of mathematics is

attributable to neglect in training the image-making power than to the neglect of the presentation of sense-magnitudes. The comparison of sense-magnitudes is essential, indispensable. Without it there can be no beginning. But the power to compare image-magnitudes is equally essential, much more difficult of attainment, and without it there can be no progress.

By much exercise in imaging magnitude and the accompanying dissociation and attention to the image itself the ideal magnitude is, at length, freed from its reference to the sense-magnitude for which it stands, and is "treated freely (I quote from Dr. Dewey), that is, as an image, not as tied down to some thing." Recombination of these ideal elements now becomes possible, and the pupil is able to exercise his mechanical imagination. Out of ideal magnitudes that have come to him, first as images of real magnitudes, he is now prepared to construct, through his power of imagination, magnitudes that have never been the objects of sense-perception. Now the field of operation is greatly extended. "Through the life of the senses he is coming up out of the life of the senses." He is leaving behind toothpicks and clay, and crayon-made squares, and cubes, and parallelopipedons of wood, and is using "mental material," if I may use the expression, in the construction of new mental products. His "material" is more plastic than clay; he cuts it without saw or knife; he compares magnitudes whose proportions are perfectly accurate; he quickly constructs any form he desires; he multiplies it until it reaches beyond the farthest limit of sense-perception; he divides it until he deals with infinitesimals; and all the while he is discovering that the real thing is *relation*.

But in the study of numerical relation one deals *principally* with imaginative magnitudes. It has before been stated that the number idea comes out of a comparison of sense-magnitudes; but that very few magnitudes can be compared by the direct action of sense-perception. Let it now be observed that comparatively few magnitudes are compared through imaging. I have never seen an actual measure 18 inches in diameter and 8 inches deep. I have an ideal measure of the dimensions named, which I have learned to call a bushel. My ideal measure, unlike any real one that you may have seen, has its proportions perfect. Its diameter is exactly $2\frac{1}{4}$ times its depth, and its periphery is a perfect circumference. This volume I have learned to compare with a 1-foot cube which, if my memory serves me, I have never seen. I compare the 1-foot cube with a $31\frac{1}{2}$ -gallon barrel, and neither of these magnitudes has ever been to me an object of sense-perception. I compare the gallon which I have seen with the 1-foot cube which I have not seen. For the purposes of exact comparison, my ideal measures are infinitely superior to the best 3-X, brass-bound measures that the shops provide.

It is perhaps possible to compare, by imaging, a 2-foot square with a 5-foot square; but is it practicable in a similar manner to compare a 2-acre field with one that is 40 rods square? The simple truth is that the principal part of the work of comparing magnitudes in the first years of formal arithmetical study, as well as in the high school and college, has to do with ideal unities. Few, very few, of these unities come to the mind of the pupil by imaging things which have at any time been objects of sense-perception. By far the greater number of unities compared are simply ideal creations of the mechanical imagination.

To employ the pupil for a long time exclusively in the comparison of sense-magnitudes or of the images of sense-magnitudes, when the principal part of his work as a student and as a practical mathematician must be in the comparison of imaginative magnitudes, is, to say the least, mis-directed effort. Comparison of sense-magnitudes there must be. Comparison of images of sense-magnitudes must quickly follow, and should receive vigorous attention. Comparison of imaginative magnitudes should not be long delayed.

The mere observation and comparison of objects of sense will not give skill in building with images. It will only furnish the "material." Simply increasing the amount of "material" will not give skill in building. Multiplying the variety of objects of sense is not so important as a preparation for higher mathematical work as is the imaging of those easily provided and the construction of imaginative variety. Quick imaging, easy rearrangement of images—this gives power; this is power.

Not long ago the following problem was given to classes in the fourth, fifth, and sixth grades, and to the seniors in a high school:

Imagine a 3-inch cube of wood. Paint all its faces. Allow the paint to dry. With a fine saw cut the cube into 1-inch cubes.

1. Upon how many of the 1-inch cubes is there paint?
2. How many of the small cubes have paint upon one face only?
3. How many have paint upon two faces only?
4. How many have paint upon three faces?
5. How many have paint upon four faces?

No actual cube was presented to the pupils and no drawing permitted. There were found in every class pupils who could answer these questions easily and quickly. There were others who could answer them, but with much apparent effort. There were yet others who could not, in reasonable time, answer them at all.

After question No. 1 had been answered and effort had been made by the teacher, working without cube or crayon, to make the correctness of the answer apparent to every member of the class, time was noted on question No. 2. In Grade 6 one pupil was ready with a correct answer in less than 30 seconds; five pupils in less than 1 minute; in 3 minutes,

three. Others came forward with correct answers as follows : $3\frac{1}{2}$, $3\frac{1}{2}$, $4\frac{1}{2}$, $5\frac{1}{2}$, $5\frac{1}{2}$, 10, 10, 12, 15 minutes. At the end of the 15-minute period the exercise was closed ; sixteen only out of twenty-two sixth-grade pupils having given correct answers.

In the senior class there were twenty-eight pupils, three of whom gave correct answers without delay—perhaps in 10 seconds ; the twenty-seventh pupil gave a correct answer at the close of a 10-minute period, while the twenty-eighth declared herself utterly unable to see the cube and its parts.

Pupils were allowed as many trials as they chose to make within the allotted time, some evidently making several guesses before they sat down determined to make the necessary imaginative effort. A pupil in the fifth grade gave the correct answer in 40 seconds ; another presented ten different answers in as many minutes, the last correct ; while a little girl eleven years of age sat almost immovable for $12\frac{1}{2}$ minutes and then presented the correct answer, and proved by further statements that her imaginative magnitudes were in exact accord with the conditions of the problem.

Omitting a few pupils, mainly in the senior class, whose fear that they would not be able to do the work required evidently impaired for the time their imaginative power, it is safe to say that the results of this experiment are a fair index of the mathematical ability of the pupils tested. Those who can answer such a question accurately in 10 seconds, 20 seconds, or even in 1 minute, have a good degree of mathematical power. Power to do what? Power to see relation of magnitudes because they can see the magnitudes. Neither are their images "tied down to some thing." They come quickly into consciousness ; are "treated freely ;" can be easily painted, divided, examined, counted, compared.

The pupils who are unable to answer such questions are the pupils who attempt to find relations of magnitudes while they are in possession of nothing but the symbols of magnitudes. Their images are images of symbols.

What shall be done for pupils who seem to be thus wanting in mathematical ability? Show them a cube? Yes, if they have never seen one. Show them paint? Yes, if they have never seen paint. But suppose they have seen these? Suppose they recognize a cube without the slightest difficulty—know that it has six square faces, eight corners, and twelve edges? Give them further exercise in the comparison of sense-magnitudes? Yes, if they do not know, when they see the sense-magnitudes, that a two-inch line is two times as long as a one-inch line ; that a two-inch square is four times as large as a one-inch square ; that a two-inch cube is eight times as large as a one-inch cube. But suppose they are able to apprehend these relations when the sense-magnitudes are pre-

sented to them, and are yet wanting in mathematical ability, what then? Train them first to image magnitudes; then to deal with imaginative magnitudes.

But how shall they learn to image magnitudes? By imaging magnitudes. There is no other way. How learn to deal with imaginative magnitudes? By building with images of magnitudes. Their condition is not so much owing to natural incapitude as it is to the habitual requirement by the teacher that they shall attempt to give relation when the terms of the comparison are not present in consciousness.

From the very nature of the case the terms of comparison in arithmetical problems must be, for the most part, imaginative. The imperative need, therefore, in arithmetical training is, I repeat, not so much mere sense-perception; neither is it mere accurate judgment of the relation of sense-magnitudes. It is more exercise (1) in imaging magnitudes, and (2) in the creation of imaginative magnitudes.

Blind children excel in mathematics. I do not mean that the work of all blind pupils is marvelous, or even excellent; but, as a rule, they do well in this branch of study, while many excel. They excel because in the very beginning of their work in mathematics their blindness forces them to do exactly what every teacher should require of every pupil in this branch of study, *viz.*, to image magnitude and to build with images. The blind child does not have one-half the opportunity for the comparison of sense-magnitudes that the child with sight has; but his condition leads him into a constant use of images. This for him is the "line of least resistance." He can make a diagram "in his head"—in consciousness—much more quickly and accurately than he can make one with pins and staples on a cushion. Moreover, he can easily find and give attention to any part of his mental diagram, much more quickly than he can do this with a sense diagram. The sense-magnitudes with which he is familiar are few and of small variety, but they are sufficient to enable him to construct in imagination every magnitude necessary to a high degree of efficiency in the study of arithmetic, algebra, and geometry.

The lesson that comes out of all this is that the normal pupil suffers not so much from lack of sufficient contemplation of the relation of sense-magnitudes as he does for want of more attention to the accurate imaging of magnitudes, and the exercise of his power of mechanical imagination in the creation of imaginative magnitudes.

The teachers in the schools for the blind may profitably increase, in every possible manner, the amount of sense-perception of their pupils. The teachers in the schools for the seeing may, with equal profit, give more attention to the power of their pupils to deal with images and imaginative magnitudes.

In conclusion: The difficulty with the ordinary pupil, then, is not so

much inability to see relation as it is lack of skill in creating the magnitudes whose relations are to be considered. The mistake in the arithmetic classes of the schools of today is the constant demand that the child shall see and express the relations of magnitudes when he has in mind nothing but symbols of magnitude. He is expected to express relation when he does not see relation, and to see relation when he does not see the magnitudes related. The remedy lies, not so much in sense-magnitudes—these can find no place in consciousness—but in the cultivation of the power to image sense-magnitudes and to create imaginative magnitudes.

DISCUSSION.

NEWELL D. GILBERT, Superintendent of Schools, Austin, Ill.—Doubtless no phase of mental activity receives less adequate consideration, or is less used from definite purpose and plan, than the imagination—this “power of mental realization.” The word imagination we tend at once to refer to fancy or to the realm of artistic or poetic creation. And definite imaging as a condition precedent and as an active, present element of all thinking receives little thought, and less intelligent, persistent effort to train. *Habits of the imagination*, as something to be formed in the process of education, come to us as something vague and far away—impracticable. But it is nevertheless the “sole mental power to depend on in the process of teaching.” It is the activity by which the mind accomplishes its own “emancipation” from the limitations of sense-perception and makes its “ascent into *formative power*,” by which the mind makes its transition from particular to general; by which the ideal, the universal, is “dissolved out of its concretion by particular facts, and is set forth independent.”

The comment, then, is not even momentary surprise that mathematics is deeply indebted to imagination in its processes, but that the necessity of this activity to any scheme of training in any subject has been so far ignored.

Furthermore, there will be at no time any question that the child's imagination is active, for this is the form the child's self-activity takes. The only question is, how it works, with what, and how we may control and direct it for his instruction and discipline. And the test of results will be a habit of spontaneous activity along the line of the instruction given.

I wholly agree with Mr. Hall as to the weakness in our teaching of arithmetic and the fundamental cause of such weakness. How to deal with the pupils in order to prevent this defect depends on the material needful rightly to occupy this activity and the conditions of its controlled working.

The very term *image* confesses the mind's indebtedness to sense-perception, and admits that, whatever its holding of imagery, all is garnered from the outer world. The child's first images—how slowly they form! How many and manifold the contacts with the original before its “counterfeit presentment” develops! But this period shortens as images increase.

The first step, then, in dealing with the imagination in arithmetic, is to supply the material out of which arithmetical conceptions may be formed, and, beyond this, to give the child in his dealing with this material the arithmetical trend. “Arithmetic deals with the relations of magnitudes.” A right furnishing of the mind for arithmetical work requires manifold knowledge of many magnitudes gathered from dealing with them in multiform

relations. The error of neglecting the imaginative activity is great, indeed ; but not greater than the correlative error of too scant provision of right material — a store of imagery wrought out from and through an increasing and greatly varied succession of sense-perceptions.

But for this I deem observation lessons and illustrative material insufficient, and to a large extent ill-adapted and wrong. As collateral aids the former are good, but are too cursory, the results too transitory to suffice. The latter implies a considerable store of images, already gathered, related to the illustration, which the illustration serves to gather and hold for comparison until the general idea issues and sets itself free, and to furnish, too, elements with which this idea in the strength of its nascent activity may combine. Both are deficient, in that they too little call forth that which is the very life of imagery — spontaneous self-activity.

"An image requires a motor discharge or outlet." Here is the indication, which we cannot safely ignore, of a fundamental need that physical and mental activities be kept in close relationship.

Mr. Hall would not, I am sure, have us limit imaging to *visualisation*. For images are formed by each sense ; and the motor images are, perhaps, most important of all for purposes under consideration here. For visual images, because of their vividness, color, and emotional qualities, rather resist the setting-free of the ideal and universal ; while motor images are comparatively unemotional, and adapted to abstraction.

But this physical activity must have a bearing which the child can see, leading to some end in which he has an interest, which to him is worth while ; it must be the means to *his* end. It belongs to the teacher to effect that her end shall become his end ; so that what is explicitly set forth by the teacher in her aim shall be implicitly known and used by the child in his effort.

That is, the physical activity is to be constructive — measurement is of its essence.

Once more, arithmetic deals with number ; number is ratio ; ratio is the expression of measurement, the result of comparison of magnitudes ; but these not necessarily themselves measured magnitudes, at least not at first. Thus arithmetic leads us directly to the point where psychology brought us.

To my mind, then, the requisite training for strong, independent, ready, imaginative thinking in arithmetic implies : at the foundation, constructive work in line of the interest of the child ; such interest to be found, for instance, in the literature or the nature work, regularly assigned ; something desirable to the child to be done, with counting, measuring, computing — all in due order and proportion, lying between him and the determined end. At first, material more than he needs should be at his command, and he count up what he has used ; later, the thing to be done having been conceived, he should compute the amount he needs and make his requisition accordingly — himself or a class-mate measuring it out. Meanwhile out of doors things he loves are forever challenging him with the questions, how many ? how much ? how high ? how long ? how broad ? how far ? how heavy ? For the first two years of school life this should be the characteristic work — a continual reference to sense material, and yet a continual breaking-loose from it as the child is able. Thus we begin to grow a habit of looking for an end and viewing the magnitudes and their relations as the means to the end, drawing freely upon memory and knowing for elements they hold in readiness. This brings the child into the succeeding years with a good store of images, a varied knowledge of relations, and a right trend. Hence we shall be able to make the demand upon him which Mr. Hall advocates ; but nevertheless must we still on frequent occasions resort to construction. Indeed, my observation leads me to fear, even in the upper grades, too little, rather than too much, use of this kind of work.

"How long must the boy go on toothpick crutches ?" The normal child — not for

a day, if we can and will ourselves learn how to give him the free play of his powers along lines plainly indicated, and cease such warping of him to our misconceptions as renders him impotent in his mathematical legs.

THE NEW ARITHMETIC.

BY JOHN H. TEAR, CHICAGO, ILL.

[READ BY HENRY C. COX, CHICAGO, ILL.]¹

There has recently appeared, as you all know, a new and beautiful book which is likely to revolutionize the teaching of arithmetic in this country. I have been asked to discuss this new doctrine. Were I able to do any sort of justice to the topic, as I am not, no task could be more acceptable to me; for, in the first place, it gives me an opportunity publicly to express my great personal obligation, as well as that of my school, not to the book itself, but to its author. For, like many of you, it was my good fortune to fall under the influence of the ideas embodied in this book, before they appeared in printed form.

In the second place, any opportunity to speak in behalf of a book which marks a distinct advance in the process of rational instruction is not by any means to be despised. "The New Arithmetic" recently issued by Assistant Superintendent William W. Speer marks an epoch in mathematical instruction.

This new theory recognizes the true nature of number. The keynote of the doctrine is struck in the preface to Mr. Speer's book: "The fundamental thing is to induce judgments of relative magnitude." The theory is that the child should be set, not to studying *about* number, nor to learning how to manipulate the bare *symbols* of number, but to exercising an activity which involves number, or which *is* number.

In the past we have seldom asked ourselves the important question, "What is number?" The makers of text-books on arithmetic, and originators of new methods, have usually assumed that number is something to be learned. Without concerning themselves as to the nature of that something, as to whether number is an objective fact in the external world,

¹ A few words in explanation, before beginning the reading of the paper this afternoon, seem eminently proper.

My dear friend, Mr. John H. Tear, about the time he accepted an invitation to prepare an exercise for this section of the National Educational Association, consented to read a paper before the Chicago Institute of Education, and to have present at the meeting a class of first-grade pupils from his own school to illustrate the principles discussed. The paper I am to read is the one prepared for that body.

Before he had time to touch pen to paper in preparation of his contribution to this association, the Master called him to other fields of thought and labor. So much is due, as his address before the institute was prepared under great press and in much haste.

or simply a mental process, all in one's head, and without making much effort to discover the mental processes by which that something called number is to be learned, most text-book makers have been content to confine their efforts to the ordering of the several parts or stages of the subject, with explanations of the processes of manipulating the number symbols involved.

However, in recent years rational instruction has come to mean instruction that is based on a knowledge of the actual thought processes involved in the learning of any subject. It was simply inevitable that number teaching should make the same advance that is being made in other subjects. Number learning is number thinking, and rational instruction in number must recognize the nature of the process of number thinking. That number is precisely this judgment as to relative magnitude, witness these definitions from eminent sources:

Said Sir Isaac Newton, who has something of a reputation as a mathematician: "Number is the abstract ratio of one quantity to another quantity of the same kind."

McLellan and Dewey, in their "Psychology of Number," say that the number by itself indicates relative value. It always expresses ratio, *i. e.*, the relation which the magnitude to be measured bears to the unit of reference.

The great Swiss mathematician Euler defined number in this way: "Number is the ratio of one quantity to another quantity taken as a unit."

I find in the "Oral Arithmetic," prepared by Assistant Superintendents Kirk and Sabin, this expression: "It is believed that the time has come to readjust our forces, to substitute more intelligent methods of procedure and more rational modes of discussion, based upon the central, underlying principle of the relation of quantities."

Says Dr. William T. Harris: "Methods must be chosen and justified, if they can be justified at all, on psychological grounds. The psychology of number requires that the methods be chosen with reference to their power to train the mind of the pupil into the consciousness of the ratio idea."

If these statements are true, if number is a ratio, an abstract relation, there is no warrant for assuming that the mere placing of groups of objects, shoe-pegs, toothpicks, and the like, before the child is going to insure him insight into numerical relations; and much less is the skillful manipulation of the bare symbols of number proof positive of mathematical thinking. To think number one must do something more than to deal with the mere language of number. To see relations one must actually make comparisons. And in order to make comparisons there must be something before the mind to compare. The child must actually deal

with magnitudes, either as physical objects in his hands or before him, or as images in his mind. Our little children can no more make bricks without straw than could the children of Israel. They must actually deal with quantities, they must compare objects one with another, as to relative size, if they are ever to come into their true mathematical birthright, freedom in thinking quantitative relations. Hence the problem that confronts the teacher of number is: "How may I provide the conditions which shall insure or compel the *seeing of relations*, and which shall, therefore, render impossible all purely mechanical processes?"

The answer is that in teaching number we must begin where the child actually is; that his growth in ideas must be a growth in actual experience; that before we can count on the child's getting exact mathematical relations, we must be sure that he has some definite quantities to compare; and that these quantities shall be so presented as to give him an opportunity to analyze and synthesize, to separate and combine, to make judgments; in a word, we must make sure that the child is not robbed of his right to think.

In the first place, then, the child must have something to deal with; he must use his senses in getting a world of objects; and the objects must stand out with some clearness and distinctness for him.

In the second place, there is a recognition of the slow development of the power to form perfectly quantitative judgments. For this reason simple exercises in relative size are given at first, and it is only by a slow and gradual advance to the more difficult that exact relations of magnitude are reached. It is only after much practice in seeing the inexact, expressed by the terms longer and shorter, larger and smaller, greater and less, unequal and equal, that the exact mathematical relations two, one-half, three, one-third, two-thirds, three-halves, etc., may be clearly apprehended.

But the most important point in this matter of arranging the proper conditions is that the quantities to be compared must be presented as *wholes* and not as *parts*. In making number judgments we begin with a vague, indefinite whole, which is given definite quantitative value by comparing it with, or relating it to, some other quantity whose value we have. In estimating the width of this room I compare the width, one whole, with the foot rule or the yardstick. My whole is a continuous quantity; it is not a group of smaller quantities pieced together. The number involved is the abstract relation of this whole to the quantity with which it is compared. In finding the relation of the magnitude *A* to the magnitude *B*, *A* is first grasped as a whole. The purpose of the comparison is to find its volume in terms of *B*. The act of comparison consists in mentally breaking up *A* into parts, each of which is equal to *B*, and then, in recombining these parts, to reconstitute the whole. This whole, *A*, has now a value which it did not have before. It is seen to be equal to four

B's. This judgment of the relation of *A* to *B* is typical of all number judgments. All relations involve this analytic-synthetic mental act. If the magnitude *A* is presented to the child, not as one continuous quantity, but as four separate quantities, each equal to *B*, there is already done for the child what he should do for himself; and because it is done *for* him, it is not done *for him* at all. He may count up the parts and mechanically construct the whole, but he has taken no step in realizing four as a relation. Because a thing is done for a child before his senses, it does not follow that the child himself gets any experience out of the act. Because a thing is physically broken into parts before a child's eyes, it does not follow that he has mentally analyzed it; the thing may never have been a whole to him. The mechanical construction of quantity with uniform blocks is no better than the counting with beans, peas, spools, toy rakes, spades, and all of the collection of objects, representing uniform and discrete quantities, which have loaded down our first-grade number tables for so long. It all leads to an everlasting counting, the evil effects of which appear and reappear in all of the grades. The "how-many" phase of number is so over-emphasized that the "how-much" of quantity is entirely lost sight of. What should be the means has become the end. Assistant Superintendent Sabin remarked a short time since: "All over the city I see the effects of our work with counters in the first grade; our children are counting through all the grades. I have seen enough of the new method already to assure me that it will do away with this counting business."

But you may say that we cannot get rid of counting; that there are things to be counted, and that children will count outside of the school and in the school; that our first ideas of number come through counting. I grant it all. Yet I maintain that the function of number is to determine the "how-much" of quantity. However we may arrive at numerical relations, the process is the same. For, in rational counting, counting that has some quantitative meaning, there is always some reference to a whole whose value is to be got by the counting process; the one, two, three, etc., must be thought of as parts of a whole, which must have been in the mind before the counting could begin. Counting is a crude way of arriving at an inexact quantitative value, except where the units counted are all equal, and the process is only one element in a larger process: the determination of the relation of a whole group to one of its parts. How much more certain is the child to get this relation of the whole if presented, not as a group of parts, but as one continuous whole? In the latter case there is something for the child to do; he must break the whole up into groups of parts, mentally, in order to get the relation. There is nothing to interfere with his analysis and synthesis, which must take place if he is ever to see the relation. Mere counting lacks the mathematical element.

All marking-off of the blocks or dividing them to facilitate the child's relating act in reality prevents the very thing which it is vainly supposed to facilitate.

Further, the fact must be emphasized that, while there can be no relations unless there is something to relate, yet these relations must be freed from any particular things. "It is not to be forgotten that there is a wide difference between seeing that the relation between two particular things is eight and realizing eight as a relation; realizing it in such a way that it can be freely used without misapplying it." To realize any number as a relation requires the seeing of that number in a great number of concrete instances. The greatest possible variety of objects must be used. "Only by multiplying experiences in the concrete, by noting the same relation in many different things and in many different conditions, does the child come to know a relation as it is." There is great danger that the particular quantities compared shall absorb the attention rather than the relation by which such quantities become recognized.

This method of finding ratios, or relations, may become just as mechanical as any other method. If the same quantities are used repeatedly, or if drills are introduced for the purpose of fixing what the child is already supposed to see, the relations are likely to become memorized and fixed in such a way as to prevent the child's seeing anything of any value. The way to drill is to cause the child to see the same relations constantly under new conditions. If this is the order of daily practice, there will be little occasion for mere drill work. Insight will take the place of memory; or rather, memory will be relegated to its legitimate place as the handmaid of insight.

This new book on number is most noteworthy on account of the ideal which it holds up to the teacher. We are not to teach number, but to develop the child. The child is not to learn number, but self-control. "When the work of the school is mechanical, it weakens the relating power, the power to act in new circumstances, and thus lowers the child in the scale of being. We may be so successful in training the child to reproduce as to destroy his power to produce. These are some of the teachings of this new gospel. Over and over again the fact is emphasized that the condition of the child must determine what he shall do. Again, there is repeated insistence that the child's activity should be free; that what is done should be done freely, without external stimulation or restraint. Free work reveals the pupil and makes it possible to meet his needs." The marvelous progress of the child during the first five or six years of his life is largely due to free action and spontaneous attention; to the absence of demands unfavorable to growth.

It is with this ideal before us that we must take up the subject of

number, if we are to achieve the highest results. We must not aim directly to *teach* number, but to *use* number as a means of comparing quantities; and we must not aim directly at the comparison of quantities, but at the development of the child. So far as we fall below this ideal, so far shall we fail in reaching the highest results. This ideal is not chimerical, and it is not beyond the appreciation of the "average" teacher. If we could only have the "self-control to persist" in letting the child alone, in being content to supply the proper conditions for free activity, and then in allowing the child spontaneously to put forth his activity and to express *himself*, however crudely, we could work up to this ideal. We must have the courage to make mistakes ourselves, and we must have the patience and the insight to let our children make mistakes. The teacher must have the insight to see that all she can possibly do is to provide the proper conditions, and then let the child alone to work out his own mathematical salvation. All forcing of results, all questioning for the sake of the answer, all demands for finished results where only crude work is possible by the child, all measurement of results by some external standard rather than by the child's needs and possibilities, are contrary to the principle of self-activity, and, so far as practiced, will thwart the self-expression of the child.

This ideal is a progressive one for the pupil. He must first be active in getting sense experience and inexact quantitative relations; a little later he is ready for the exact relations of quantity expressed in physical objects; as he acquires physical control and the power to think in images, he becomes prepared to deal with quantitative relations expressed in mental images; later he has freed the relations from the terms compared and can apply them anywhere; he has reached the stage of free ideas; he has mastered the method of quantitative thinking. As the pupil gains the power to think the relations of quantity away from the physical objects, he acquires the ability to solve mathematical problems. Every problem presents to him certain conditions. In these conditions are involved certain quantities and certain relations, or ratios. In the simplest of these problems there are always given, either two quantities to find a ratio, or one quantity and a ratio to find the other quantity. Let the problem be to find the cost of a box of candy, when $\frac{2}{3}$ of the cost is 12 cents. Here we have one quantity, the 12 cents, and a ratio, $\frac{2}{3}$, to find the other quantity. Five-halves equal the ratio of the quantity to be found, the cost of the box of candy, to the quantity given, the 12 cents. Five-halves of the 12 cents equal 30 cents, the cost of the box of candy. Or, again, let the problem be to find $\frac{1}{3}$ of the value of an estate, when $\frac{1}{4}$ of the value is x . Here are given two quantities, $\frac{1}{3}$ of the estate and $\frac{1}{4}$ of it, to find the ratio and then to use the ratio in getting another expression for one of the quantities given. Four-ninths equal the ratio

of $\frac{1}{3}$ of the estate to $\frac{2}{3}$ of it. Then the value of $\frac{1}{3}$ of the estate equals $\frac{2}{3}$ of x .

These problems are typical of all simple problems. The more complex problems differ only in the number of quantities and relations involved. In order to solve such problems intelligently, the pupil must be able to represent to himself the quantities with which he is dealing. The practice of finding the relation of solids, surfaces, and lines in the primary grades develops the ability to make the representations necessary to see the quantities and the ratios involved in these practical problems; and in such power of imagination and insight lies their solution.

DISCUSSION.

HENRY C. COX, Chicago, Ill.—I feel that if Mr. Tear were here today, he would want to emphasize somewhat a point or two in the paper, and I take advantage of the President's consent to employ a little time in doing it for him.

Says Mr. Tear: "If the magnitude *A* is presented to the child, not as one continuous quantity, but as four separate quantities, each equal to *B*, there is already done for the child what he should do for himself, and because it is done *for* him, it is not done *for him* at all."

I have in mind a teacher who, having seen some of the legitimate work done by pupils from another room in the same grade with hers, and supposing the purpose to be to say words rather than see relations, took occasion to write in heavy letters upon the blocks furnished, "*A* is one, *B* is two, *C* is three," etc.; so a pupil, taking into his hands blocks *A* and *B*, would say quite glibly, "One-half is the ratio of *A* to *B*; two is the ratio of *B* to *A*." But, as an occasional pupil still halted in saying what was thought to be the right thing, she effectually put a block to all thought by putting on the board a set of equations to fit the several cases. With her the purpose seemed to be to memorize number relations.

Another thing he desired to emphasize is the need of patience and a willingness to proceed slowly. Sometimes a teacher, noting the adeptness of another's pupils, and not taking into account the element of time, is disappointed at what seems to be stupidity in her own pupils, and attempts to force them into saying they see what they do not see, and what they are not ready to see.

Some people are blessed with a constructive imagination, and from a cervical vertebra are able to construct the animal. Others are not so gifted.

Let us suppose that ample time has been taken to familiarize the children with the indefinite relations of magnitudes, expressed by the terms longer and shorter, greater and less, larger and smaller, equal and unequal.

The class is arranged about a table strewn with blocks of various sizes and of all shapes, whose relations can be measured by the eye. Each member of the class takes into his hands two blocks, and, assuring himself of the relations between the two, recites, maybe, as follows: "Four is the ratio of this to this; one-fourth is the ratio of this to this." The teacher, taking the smaller, says: "I have a pint of milk worth three cents." The pupil responds: "I have four pints of milk worth twelve cents."

Another pupil, who has chosen a block one by one by four, and another two by two by three, says: "Three is the ratio of this to this; one-third is the ratio of this to this."

The teacher, taking the larger one, says: "This is a basket of oranges worth a dollar."
Pupil: "This is one-third of a basket of oranges, and is worth one-third of a dollar."

In the cases cited we have had a little unconscious (so far as the child is concerned) exercise in the tables. I think experience has shown that the pupils learn all the tables without effort to do so.

A pupil has two blocks, one an inch cube, and the other one by one by five. He has made mental or actual measurement, and expressed the relations, when the teacher, taking the larger, says: "Let us play that this is a quarter of a dollar." The pupil responds: "Twenty-five cents equal five times five cents." Exchanging blocks with the pupil the teacher says: "I have three oranges." The pupil: "Three oranges equal one-fifth of fifteen oranges." The teacher, taking in hand a block two by two by five, says: "Find me two blocks together equal to this." Pupil, taking a block two by two by three and one two by two by two, responds: "Twelve and eight are twenty." The teacher may then call for the other sums illustrated by two blocks equal to twenty, then for three, four, and five; for four equal quantities whose sum equals twenty; for five, and for ten.

Taking a block three by three by four, the pupil having one two by two by three, the teacher says: "What part as large is yours as mine?" "What may you now take to have the equal of mine?" "What must John take to have the equal of yours?" Such problems lead to the ready finding of differences, giving facility in subtraction.

She may say: "How many of yours will equal mine?" "What part of mine equals yours?" "Who will find a block equal to one-half of mine?" "One-third?" "Two-thirds?" "One-fourth?" "Three-fourths?"

Through these and similar exercises the pupils become familiar with the four operations in arithmetic through a sense of need.

I'll now submit a few book problems and intimate the lines of thought exercised by children.

1. If 3 bushels of wheat cost \$2, what will 12 bushels cost? The pupil thinks: "Twelve bushels equal 4 times 3 bushels; they will cost 4 times \$2, which is \$8."

2. If $\frac{3}{4}$ of a yard of cloth is worth \$1.20, how much is $\frac{1}{2}$ yard worth? Pupil: "One-half equals $\frac{2}{3}$ of $\frac{3}{4}$; $\frac{1}{2}$ a yard of cloth is worth $\frac{2}{3}$ of \$1.20, which is 90 cents."

3. How much are 4 pounds of coffee worth at 30 cents a pound? Pupil: "Four pounds equal 4 times 1 pound; they are worth 4 times 30 cents, which is \$1.20."

4. At 10 cents a pound, how many pounds of raisins can one buy for 75 cents? Pupil: "Seventy-five cents equals $7\frac{1}{2}$ times 10 cents; one can buy $7\frac{1}{2}$ times 1 pound, which is $7\frac{1}{2}$ pounds."

5. If 7 pencils cost 42 cents, how much is that apiece? Solution: One pencil equals $\frac{1}{7}$ of 7 pencils; it will cost $\frac{1}{7}$ of 42 cents, which is 6 cents.

6. If 3 oranges cost 20 cents, what will be the cost of 8 oranges? Pupil: "Eight oranges equal $\frac{8}{3}$ of 3 oranges; they will cost $\frac{8}{3}$ of 20 cents, which is $53\frac{1}{3}$ cents."

But I must not occupy more time. Quoting the spirit of the paper, let us furnish the conditions, and be patient to let the children do their own thinking, and to give their thought its own expression. Let us do this, and I believe that a better culture will be the heritage of the pupils who shall develop under the guidance of these principles.

ELEMENTARY MATHEMATICS AND EDUCATION.

BY L. W. COLWELL, PRINCIPAL OF THE CARL VON LINNE SCHOOL, CHICAGO.

Since power to think is the ground of intelligent action, education must develop instinct and impulse into deliberate choice. But choice

implies insight, insight deals with essence in the mode that we style meaning, and meaning is revealed by thinking. The mind that fails to think fails to function. Therefore, whatever education may do for the race by refining the sentiments and æsthetic tenor of the coming generations; whatever it may achieve in the formation of habits and training for especial pursuits—it cannot develop a high type of manhood and womanhood without appeal to the divine faculty of reason. Whatever it may teach of self-reliance, industry, co-operation, accuracy, exalted purpose, it must hope for these things through richly conceived ideals and well-executed purposes. The keynote of power is thoughtful willing.

That mind is truly educated which has developed into the power to weigh remote consequences through representation and to determine action by judgment. One of the chief purposes of education, therefore, is to stimulate active thinking. The material of learning must not only be rational, but it must harmonize with the condition of the learner. Our crying need is not so much logical presentation of the principles of subjects as it is psychological induction into their spirit. What we need especially to emphasize is not receptivity, but self-activity. The mind that keeps thinking keeps growing.

But thinking is impossible without sense-experience. Its processes deal with sense-products directly perceived or recalled, or they deal with abstractions derived from sense-products. Therefore, education must either school the senses through discipline of attention to sense-impressions, or it must depend upon the desultory furnishment which unassisted nature gives. To direct attention early to abstractions is to overlook substance in attempting essence.

That such effort does not utterly fail and always is due only to the training of the senses necessitated by the accidents and incidents of life. To depend on this for educational data is to depend on chance. The only certainty of progress rests upon systematic culture in observing and classifying contacts, sights, sounds, etc. Preyer says truly: "Without the power of representation there is no will; without activity of the senses there is no representation; thus the will is actually, inseparably bound up with the senses."

Out of attention to experiences, and by means of the comparing necessary to discriminate them, grows the power of conceptual thought. Impressions are sensed as like or unlike. Cognition of these primary feelings with their objective reference constitutes perception of particular relations. Identifying particular relations is perception of universality, and is found in every act of thinking.

The nature of thinking, therefore, would indicate a method of teaching mathematics that requires comparison of those objects of sense that manifest mathematical relation.

Counting and the use of counters do not necessitate that balancing and judging which constitute the essence of estimating, and must, therefore, fail to produce mathematical insight. The pupil who learns mathematics by counting does not learn it because of the counting, but because of judgments of relative worth occasioned in some other matter than by the teaching. The futility of dependence upon counting to awaken mathematical thinking cannot but be clear when we stop to consider the mental reactions that it represents.

The mainspring of mathematical activity in the race is the attempt to adjust means accurately and economically to a material end. The human mind created mathematics, because it needed it to subdue nature and achieve freedom.

Mathematical relations exist in nature; proportion is a law of all things. From the perception of things as somewhat like, the mind advances gradually to the perception of exact likeness, and through continued study of things develops the science of mathematics. The one great problem of mathematics is determination of magnitude, and the natural practical path to mathematical culture is by the training of the mind through the eye and hand to nice discriminations of equality.

But quantity cannot be determined absolutely; indeed, all things are known relatively. Only by comparing a quantity with another quantity can it be apprehended and expressed. Discovery of mathematical truth takes the form of judgments of relative magnitude.

Of course, anything has quantity that can be measured. We may think of magnitudes of time, of heat, of color, of velocity, of weight, of purchasing power, etc., but we cannot compare these easily or exactly and do it correctly. The means for determining quantity in any such case is shown by Herbert Spencer to depend upon inference from spatial relations. The space emptied of sand in the hourglass, or the arc of a circle passed by clock hands, does not measure time directly, but it renders inferences possible as to comparative amount.

In every case the only means of exact quantitative comparison is by means of geometric forms. This may be direct, as in some cases of distance, capacity, area, and volume, or indirect through inference, as in the cases referred to.

The development of mathematical insight, therefore, must perforce take the form of study of relative amount or ratios, as manifest in geometrical units, which can be easily and accurately constructed. The meaning and use of ratios must depend on keen discriminations of equality and ability to produce and reproduce representative forms. Elementary mathematics should, therefore, lay a firm foundation in accurate imaging and frequent reference to sensible objects as the interpreters of significance.

The first quantitative notions of children are, of course, crude and ill-

defined. Adequate recognition of equality develops gradually. All progress in education is from things vaguely defined to things more clearly defined. Mathematical comparison begins in a qualitative stage and uses the inflections of adjectives. An appropriate exercise is the securing of such observations and expressions as: "This book is longer than that;" "My box is wider than yours;" etc. Such work must be continued until the idea of equality is somewhat differentiated.

This clarifying process may be assisted by trials at drawing, cutting, or modeling things equal to presented ones or remembered ones. Repeated efforts sharpen discriminations and make later progress sure. All advance whatever toward a more perfect definition of imagery is toward mathematical power. This work is important, for the notion of equality, equation, oneness, which constitutes the meaning of the ratio 1, is the fundamental notion of mathematics.

When experience with comparing has been broad enough to universalize the ratio 2, it is as though the mind had grasped the significance of the proportion $A : B :: C : D :: 6 : 12 :: 8 : 16$, and so on indefinitely, dropping the terms out of sight, dropping the individual ratios out of mind, and holding fast to the common element of meaning as an object of thought. It will be noticed that two terms are necessary to every comparison. Clear apprehension of this point is the key to mathematical thinking.

But there is another side to this discussion. The establishing of ratios and universalizing them, together with the enrichment of these concepts by attaching to them abundant particulars, fasten the concept as a bond upon the particular terms. They serve, therefore, to restore a missing term. Suppose that 16 and 8 have been seen as exemplifying the ratio 2, thought of 8 and an unnamed unit which has the ratio 2 to the unit 8 must supply the name 16 for the larger unit, because 16 is an indispensable part of the equation $16 = 2 \times 8$, and this equation must be thought as a whole or not at all. Of course, the 16 must be remembered as the proper associate of 8, but general notions, universals, ratios, organize memory and hold particulars as examples, enriching the individuals by putting ideality or meaning into them. Appeal to organic memory is easy, sure, and natural, because it is in harmony with mental growth. Mere memorizing of arbitrary symbols, on the other hand, kills investigation, originality, and rationality.

We may reduce drill to a minimum through interest, spontaneity, self-expression, and varied repetition, but we cannot escape it entirely. These needful visual forms must be fixed upon those sight centers which we are told are located in the cortex of the posterior part of the brain. This is done by visualizing or recalling sight images. This so modifies and organizes nervous tissue that the presence of any two figures in conscious-

ness brings up their customary associate in the equation. This is mechanical, truly. That is the reason it is good. The aim of all education is the mechanism or habit which makes for freedom. That which is to be shunned as intellectual poison is the mechanism which does not originate in intelligent action and spontaneous expression.

In this specific and definite representing of the terms of a fundamental equation lies the answer to any question that may be asked about these terms. This embraces all that is classed under the so-called fundamental rules. All the problems of arithmetic are of two types : first, knowing the two terms compared, and finding the ratio ; second, knowing one of the terms and the ratio, and finding the missing term. Use of these principles breaks down all the artificial distinctions that have been raised in the subject of arithmetic and have tended to obscure clear thinking.

This paper should not be closed without reference to the part that physical activity plays in intellectual development. It will be pretty generally conceded that the children in our schools sit still too much. More stirring about would develop better breathing and quicker circulation. The brain would probably receive more blood per second in common with the rest of the body, and its power would be correspondingly increased. But there are other than hygienic reasons for motor activity in the schoolroom, and they lie at the very base of all intellectual activity.

Will is co-ordination of motor activity. It becomes possible only because of the power of representing the outcome of impulse. This representative power is intellect. It grows by representing more and more remote or abstract ends of action. Effort to develop intellect should, therefore, regard motor development as its basis, its origin, and its end. Thought exists as a link in the circuit of intelligent action, intermediate between sensing and doing. Sensations of all kinds are so closely interwoven with motor experiences that a large part of our ideas — possibly all — are sensory-motor. Ribot, the eminent French psychologist, says : " Attention always acts upon muscles and through muscles. There is no perception without motion. All sensorial organs are at once sensitive and motor."

The bearing of motor training upon education is expressed by another psychologist thus : " Elements are held together in memory because held together in action." The training of judgment is evident in a game of quoits or of ball ; but we do not wish to train athletes. The end set up for achievement must ever be removed further and further, as achievement becomes easy ; so that attention is directed more and more to pure abstractions. Action is influenced by desire. Desire is for a represented end. The means to that end are selected by judgment.

Hence, judgment must deal much with motor signs. Significance of presentation depends largely upon motor signs.

The application of these observations is obvious. We should have, in addition to frequent periods of relaxation in school and a thorough mingling of earnest work with joyous play, attempts to develop discriminations by means of doing. Cutting, drawing, modeling, and molding, together with games in the primary grades, furnish a sure and firm foundation for insight, while they subordinate hand and eye to intelligent purpose.

DISCUSSION.

W. H. SKINNER, Nebraska City, Neb. — The arrangement for discussion of a paper presupposes one of two things, or both of them, *vis.*, either that the paper asserts something that it should not assert, or that it has left something unsaid. But I find myself left to the disadvantage of being compelled to say the same things Mr. Colwell has said, and of being unable to say them as well. It is, however, a noble characteristic of great truths that they may be repeated without loss of intrinsic value.

1. Then let me repeat what has been said, *vis.*, that we must teach, not numbers, but quantity; for number is only a part of the truth involved. In the history of elementary mathematics we have gone through very distinct periods. We have at one time taught "figuring." At another we have taught the ultimate truths of mathematics, without connecting these truths with facts, and the result of such teaching was a mathematical vocabulary, without a mathematical experience. Then, again, we have taught the facts of mathematics, without connecting these facts with the ultimate truths of mathematics. That is our shortcoming today. We use objects, present facts, but do so in such a narrow field of view that the pupil is not led further than isolated facts; he reaches no great fundamental truth by his experience. For illustration, it is not enough that we lead a pupil to see that the sum of the three angles of a *particular* triangle is equal to two right angles; that isolated fact is of little service to him, if he stop there. To gain valuable knowledge he must proceed to the ultimate truth that lies beyond that fact, and see that the sum of the angles of *any* triangle is equal to two right angles. That is the ultimate truth that makes his study of any value to him. This illustrates the narrowness of our present teaching of mathematics. We are stopping short of the fundamental truths that make the study of any great service. Hence we must assent to the proposition that we should study "*definite relations of magnitude.*"

2. A second point worthy of reiterated statement is the necessity of sense-training. The relations of magnitude require such acute sense-perceptions that such training should not be left wholly to incident. It is to the study of mathematics what interval studies are to music. The interval is not much in the way of harmony, but its apprehension is absolutely necessary. And not only in mathematics is this sense-training necessary; it is just as necessary in the interpretation of literature and of art. Hence this training appeals to us, not as a narrow fact, but as a fundamental truth. But this sense-training is incomplete, unless there is trained, along with it, the power of recalling the image—visualizing, as Sir Francis Galton calls it, and imaging, as Mr. Speer calls it. And this, too, is a fundamental truth, and hence of the greatest significance.

3. We are now ready to study relative magnitudes. Sense-perceptions are keen and

accurate. Pupils can compare magnitudes, discover relations, and state the ratios. There is one more step. Ultimate truth lies in the abstract, not in the concrete. The child must now be loosed from the bonds of sense. Two things enable us to do this service, *vis.*, (a) the use of a variety of objects and forms of objects; (b) and the use of the variable unit, as discussed in the paper. The relation of magnitudes is now seen in its broadest sense. It rises from the particular concrete object to the abstract principle, from the narrow fact to the ultimate truth.

When the subject of mathematics is thus taught, it becomes of broad educational value. Its study then develops *power*—power that shall be useful in every field of mental activity.

DEPARTMENT OF SECONDARY EDUCATION.

SECRETARY'S MINUTES.

FIRST SESSION.—TUESDAY AFTERNOON, JULY 6.

At the close of the principals' round table, President C. H. Thurber appointed the following Committee on Nominations for officers of the department:

Principal W. J. Pringle, Aurora, Ill.
Principal J. Remsen Bishop, Cincinnati, O.
Superintendent L. H. Ford, Owatonna, Minn.

The meeting then adjourned.

SECOND SESSION.—WEDNESDAY AFTERNOON, JULY 7.

JOINT SESSION OF THE DEPARTMENTS OF SECONDARY AND HIGHER EDUCATION.

The meeting was called to order by President Joseph Swain of Indiana University, President of the Department of Higher Education.

The report of the chairman of the Joint Committee on College-Entrance Requirements was submitted by A. F. Nightingale, Superintendent of High Schools, Chicago, Ill.

The report was discussed by Dr. Nicholas Murray Butler, Columbia University; Professor A. C. McLaughlin, University of Michigan, and Professor H. Morse Stephens, Cornell University.

Dr. Nightingale read the report of the Committee of Twelve of the American Philological Association on the Study of Latin and Greek.

Motion was made and carried that the report be accepted and included in the minutes.

REPORT OF THE COMMITTEE OF TWELVE TO THE PHILOLOGICAL ASSOCIATION.

The members of the American Philological Association have already received, by the courtesy of the *School Review* (an official organ of the National Educational Association), "off-prints" with an account of what the Committee of Twelve has done. This committee now begs to present the following report of its action:

The American Philological Association, at its meeting in Providence, in July, 1896, directed its Committee of Twelve, in accordance with a request made by the instructors of Greek and Latin in the high schools and academies of the United States. This Committee of Twelve was first appointed in Philadelphia, in December, 1894, to give effect to the vote of the association passed at that time, which strongly urged that at least three years of study be devoted to Greek in the courses of preparatory schools.

The chairman of the Committee of Twelve, Professor Goodwin, of Harvard University, and another of its members, Professor Warren, of Johns Hopkins University, have been absent from our country during the last year, and in their stead Professor Clement L. Smith, of Harvard University, and Professor Herbert Weir Smyth, of Bryn Mawr College, were called to membership in the committee. This committee held its first session for the year in New York city, on December 31, 1896. Professor Seymour, of Yale University, was elected to serve as chairman during the absence of Professor Goodwin. Scholars of undoubted pedagogic ability and experience were invited to serve in auxiliary committees for the preparation of the Greek and Latin programme. More than six thousand circulars of inquiry were sent to teachers of Latin and Greek, superintendents and principals of schools, and others who are prominent in educational work in this country. Nearly one thousand replies were received to these inquiries, giving to the committee a mass of material for consideration—exact information with regard to the actual work of schools and opinions of specialists—such as had

never been gathered before for this subject. Great and general interest in the undertaking of the committee was evinced by the care with which most of these replies were prepared. These replies were carefully tabulated by Dr. Arthur Fairbanks, of Yale University, and laid before the committee at its meeting in New York city on April 14 and 15. The committee was then in session for two days, and worked diligently. After listening to a statement with regard to the answers to its inquiries, and to discussions on certain general questions which were largely based on presentations of the best methods of Greek and Latin instruction in Europe, the committee divided into two sections for the preparation of the programmes for the schools.

The Greek programme presented a simple problem, in view of the limited time which can be given in the schools to the reading of Greek literature, and of the small amount of Greek literature which is suitable for classes of beginners. The problem has been still further simplified by conference of the Committee of Ten, the Commission of New England Colleges in the spring of 1896—all of these in substantial agreement with each other, and already proved by many of the most able teachers of the country. The replies to the committee's circular of inquiry gave all needed information, both as to what is actually done in our schools, and as to what is desired. From California, Wisconsin, and Tennessee, in particular, had come letters which presented a most hopeful view of the position of the classics in the schools, and urged that the committee should yield to no suggestion of a weaker, less exacting course of preparation for college. The weak section of the committee was unanimous in reaffirming the position taken by the Greek conference for the Committee of Ten, and proposed a programme which is in essential agreement with those of the Commission of New England Colleges and Columbian Conference of 1896. This action was confirmed by the whole Committee of Twelve, with its auxiliaries. Since the committees were composed of representative teachers and scholars, and had before them full information with regard to nearly all the schools in the country in which Greek is taught, and had sought and learned the opinions of many teachers, and based their action in form on that of the most important commissions and conferences, and were of one mind in all their action—the Greek programme may be considered as essentially in its final form, but suggestions are still welcome, although the committee believes that most teachers who had opinions of weight which they desired to express have already been heard, and the committee desires permission to present its full report on this Greek programme later in print. That every teacher will be satisfied no one can expect, nor that the programme will be suited to the powers of every school. In some parts of the United States work is crowded into two years, to which three years are devoted in other schools. Under exceptional circumstances, with earnest scholars and skillful teachers, and long school years, the work of preparation for college in Greek may be done well in two years, but in general, with less earnestness and skill, this work is likely to be superficial if it is so hurried, and the Committee of Twelve is prepared still (and more earnestly than ever) to urge the maintenance of a three-years' preparatory course in Greek. The committee was not directed to prepare a plan which could be carried out at once in every school, but to present the best programme which is practicable for the schools of our country under prevailing conditions—for public high schools as well as for endowed academies and private fitting schools. Those who criticise the programme should endeavor to ascertain the facts and opinions on which it is based.

The problem before the committee with regard to a programme for the study of Latin in the preparatory schools is much more intricate. The length of the course is greater, and the number of works of Latin in literature available for the reading of schools is three times as great as of those available for Greek reading. The possible number of combinations is five or six instead of one. Information from American experience with regard to five-year and six-year courses in Latin is as yet somewhat scanty, although a number of schools of the East and of the West have adopted such programmes. The Latinists of the Committee of Twelve, therefore, although they present provisional programmes for discussion, yet desire to be allowed freely to modify their propositions before they make their final report. They have already held one conference since the April meeting of the committee, and have called to their aid yet other scholarly teachers.

For the reasons stated the Committee of Twelve, although it has accomplished the work to which it was originally appointed, desires to be continued, and to have the programmes now presented considered as only preliminary.

THOMAS DAY SEYMOUR, *Chairman*,
CECIL F. S. BANCROFT,
FRANKLIN CARTER,
WILLIAM GARDNER HALE,
WILLIAM R. HARPER,
FRANCIS W. KELSEY,
GEORGE L. KITTREDGE,
ABBY LEACH,
CHARLES FOSTER SMITH,
CLEMENT L. SMITH,
HERBERT WEIR SMYTH,
ANDREW F. WEST.

Professor F. N. Scott, University of Michigan, proposed the following resolutions. On motion of Professor Scott, seconded by President James H. Canfield, Ohio State University, the resolutions were adopted.

Resolved, That a committee of six be appointed by the chair, to examine into the state of composition teaching in secondary schools, and to consider questions that may arise in the course of such inquiry;

That a joint session of these two departments be held next year for the purpose of hearing and discussing the committee's report;

That the two departments join in requesting that the association appropriate a sum of money, not to exceed \$300, to meet the expenses of this committee.

Dr. Nightingale presented the following resolutions, which were adopted:

WHEREAS, The Committee on College-Entrance Requirements, appointed at Denver and continued at Buffalo, has been laboriously at work for two years, and has through its reports, by correspondence, and in the appointment of subcommittees, awakened an increasing interest in this important subject of closer relations between the secondary schools and the colleges; therefore be it

Resolved, That the committee be continued and instructed to carry on its work to completion.

Resolved, That the committee be empowered to add to its number four others, two representing the Secondary and two the Department of Higher Education.

Resolved, That the members composing this joint committee of the Secondary Department and the Department of Higher Education do hereby make an earnest appeal to the Board of Directors of the National Educational Association to make a suitable appropriation to carry on the work of the committee, which has been so well begun.

At the Round Table in History Superintendent A. F. Nightingale, Chicago, Ill., presented the following resolutions:

Resolved, That it is the sense of the Round Table of History of the Secondary Department that the study of general history, so called, should be abandoned, and that our secondary schools, whenever practicable, should offer history at least four days in the week for each year in the course.

That the plan should consist of ancient and mediæval history, modern history, English history, and American history courses, each one year in length.

That, where schools can offer but one year of history, the subject-matter should be in accordance with a purpose to advance the highest interest of a majority of the pupils.

That the college requirements should be so elastic that, where but one year is given, that particular history should be accepted which has been pursued for one entire year, and which the pupil is compelled to offer.

Professor B. A. Hinsdale moved that Professor Nightingale's resolutions be adopted.

Principal Henry S. Purdy, Brewster, N. Y., thought American history should be studied during the first year of the high school.

George B. Aiton, of Minnesota, moved the appointment of a committee of three to present resolutions on the subject next year.

Professor S. G. Williams, Cornell University, questioned whether modern programmes have room for so much history as Superintendent Nightingale's resolutions advocated.

Moved and carried that Professor Aiton's motion be substituted for the resolutions presented by Superintendent Nightingale.

The leader appointed the following committee to draw up resolutions which shall bring before the department at its meeting next year the question of the continuance of general history in high-school curricula:

Principal E. V. Robinson, Muskegon, Mich.

Principal Wilson Farrand, Newark, N. J.

H. S. Vaile, Chicago, Ill.

The session then adjourned.

THIRD SESSION.—THURSDAY AFTERNOON, JULY 8.

At the close of the round-table conference a business session of the department was called to order by Principal Wilson Farrand, of Newark, N. J.

The Committee on Nominations presented the following report:

For *President*, George B. Aiton, State Inspector of High Schools, Minneapolis, Minn.

For *Vice-President*, Mrs. May Wright Sewall, Classical School for Girls, Indianapolis, Ind.

For *Secretary*, E. G. Cooley, Lyons Township High School, La Grange, Ill.

The report of the committee was adopted, and the nominees declared elected. George B. Aiton presented the following resolution :

Resolved, That it is the sense of this department that in the English work of the secondary schools a large and open list of books for reading and study is preferable to a small required list, such as is recommended by the Joint Committee on Uniform Entrance Requirements in English.

Principal J. Remsen Bishop, Cincinnati, O.; Principal Wilson Farrand, Newark, N. J., and Principal C. W. French, Hyde Park, Ill., spoke in favor of the resolution, which, on motion of Principal W. J. Pringle, of Aurora, Ill., was adopted.

The department then adjourned.

IDA BROCK HASLUP,
Secretary.

PAPERS AND DISCUSSIONS.

REPORT OF THE CHAIRMAN OF THE JOINT COMMITTEE ON COLLEGE-ENTRANCE REQUIREMENTS.

BY A. F. NIGHTINGALE.

The second report of the Committee on College-Entrance Requirements, appointed at Denver and continued at Buffalo, is before you in the June number of the *School Review*, and is published, as was the report a year ago, without expense to the committee, through the courtesy of Dr. Charles H. Thurber, the editor, whose membership on the committee has been of invaluable service in enabling us, without funds, to publish two elaborate reports of our investigations in two successive years.

The more this subject is studied, the deeper the investigation, the more widely extended the statistics gathered from secondary schools and colleges, the larger the number of educational associations that appreciate the situation, the greater the accumulation of public opinion aroused through the educational press, the more impressive becomes the importance, the absolute necessity, of a reform in secondary courses of study, and in college requirements for admission.

My own personal opinions are so well known ; my intense enthusiasm for the triumph of this cause, which involves the future of every boy and girl in America, is so thoroughly understood ; I have written so much and talked so many times on this subject, that it is extremely difficult to present anything today that is inspirational or new.

If, however, I can express any thoughts that shall arouse your commendation or your criticism, excite your interest or your indignation, and stir this distinguished audience of college and secondary-school men and women to an intelligent and earnest grasping of the great question, "What ought to be provided educationally for the young men and women

of this country who surrender themselves, in their pliant and undeveloped years, to the wisdom or the folly of those who make courses of study and provide faculties of instruction?" I shall be content. The fires are already lighted, and they need but the added fuel of intellectual common sense to kindle a conflagration that shall consume the time-worn, the age-shattered conservatism of the past, and open the way for new forms of thought, new lines of study, adapted to the changed conditions of society, the changed ways of business, and the changed aspects of what true education means for the individual.

Were I to present a digest of what has been written and said for ten years on this subject of harmonizing college-entrance requirements, without ignoring the young people in our secondary schools who are pursuing a course without regard to the avenues that they may open to them at its completion, it would be condensed into the brief question, What is the educational value of different subjects of study? This has been the *casus belli* between the classicists and the scientists ever since Agassiz taught us how to turn the leaves of nature, and President Porter said, "There is absolutely no substitute for classical study."

At the end of every pitched battle the enemies have slept upon their arms, and on every succeeding morning each has inscribed victory upon its banners. Amid this war of words, and the consequent rise of envy and jealousy, creating a lack of harmony in the college, and an imitative spirit of distrust in the secondary school, our educational progress has been retarded, unity of method has been impracticable, harmony of requirements impossible, and the very best interests of a great multitude of secondary pupils have thereby been disregarded.

The conflict has reached the limit of forbearance. A truce has been settled upon, a treaty signed by which the leaders and their followers, from giants to pigmies, have agreed to disagree. It has always been a question that no intellect short of conscience could decide, and the nearer the human has approached the divine, the more conclusive has become the evidence that this subject admits of no solution within the limits of finite reason.

There can be no progress, however, without agitation, and, were it not for the benefits of discussion, there would be no assemblies of this character, no need of committees to obtain a consensus of opinion, no call for investigation into the resemblances and differences of courses of study and the reasons therefor.

Your committee has indulged in voluminous correspondence; it has visited many educational associations and conferences; it has secured the appointment of distinguished committees on nearly every subject within the limits of a secondary curriculum, reports from all of which are as yet but tentative, but which, during the next year, will deal exhaustively

with every study, and submit conclusions to this committee for correlation and classification.

To my own personal thought there is to be one important issue of all this research, *viz.*, that the educational value of a study is to be based, not upon specific intrinsic worth of a single subject, not upon the magic power resulting from the pursuit of a particular study, but rather upon the innate talent for and the time devoted to that study.

A boy, endowed by nature with a love, taste, and talent for physical phenomena, who shall, under the direction of an inspirational teacher, devote the four years of his secondary-school course to the study of physics by correct methods, with a proper amount of collateral work, of course, will become as great a power in the world and be as useful to himself and his generation as the boy who, fired with a zeal for linguistic knowledge, devotes the same time, under similar conditions, to the study of Greek. Let the boys change places: require the former to study Greek four years, and limit his pursuit of physics to one; nauseate the latter with physics for four years, and confine his Greek to one; and what is the result? You have with violence changed the course of nature; you have curtailed the influence of heredity; you have discounted the possibilities of a successful career; you have tried to fill the capacity of a sphere with a cube; you have prevented what might have been the making of two strong men. Talent and time, I repeat, are the elements of educational value. Courses of study should be so elective as to give all pupils, under wise direction, a choice of work, and so elastic as that one may pass from a study which militates against mental growth to one to which his organs of assimilation and appropriation readily respond, as easily and as philosophically as one changes from a harmful to a wholesome diet.

You may argue that wherein the endowments of nature are weak they must be strengthened, that a study which is distasteful to a pupil is the very study he should pursue, that by that study he may secure the gray matter that is lacking. You can make such a statement, I say, but you cannot prove it—to me. There is no law, physical or psychical, in earth or heaven, yet revealed or discovered that can be applied in the demonstration. The canons of logic will not convince, nor the refinement of rhetoric delude, us. The world's history is replete with proofs of another character. The demonstration is visualized. The wrecks along the shore of time, thick as the leaves that strew the brooks of Vallombrosa, teach us the fallacy and the folly of an effort to improve upon or to outwit nature.

You can lead a horse to water, but you cannot make him drink. You can legislate at will, but legislation does not create morality. You can induce your representatives, by an appropriate consideration, to pass an

enactment that the flag shall wave over every schoolhouse, but no law will make those same legislators patriotic.

Compulsion under any circumstances is not a healthful form of government. Freedom, under proper restrictions, is the first law of nature. It is the duty of educators to study mental phenomena, and to adapt their instruction to the needs of the individual. But until the capacity, the aptitude, the talent, and genius of the child are known, some one asks, what shall be done? Experiment, of course; but there are few pupils that will not reveal, after sixteen years of life, certain inheritances of mind, certain aptitudes of skill, that will enable the wise educator to guide such pupils along those lines of thought and investigation which will give to them the largest income from their possessions.

It took nearly 1,900 years to produce, utilize, and control the one element of electricity, while it was displaying its power to the ignorance of humanity from the very origin of the species. Homer and Plato were read a thousand years ago as intelligently as now. Homer and Plato are good reading still, but it is better for some people to study dynamos, while others read Demosthenes. So much for talent; how about time? Studies that have been pursued from one-half year to a year have been weighed in their results with those that have been continuously pursued for three or four years, and the linguist who occupied the throne said, "There is no comparison between the power derived from the one and from the other." I have no disposition to turn the tables. I would give the ancient languages all the time they have ever had, and encourage a multitude to study them thoroughly, exhaustively, but I would give to other studies just as much time, in the unraveling of whose secrets and the unfolding of whose laws equal power is to be gained—and power which shall be of still greater potentiality in the advancement of the race. I would have science, not only in each year of the secondary course, but I would give pupils whose talents seem to call for it the opportunity of pursuing the same science two or more years. I would have history in each year of the course, and permit pupils to study it one or three years, more or less. I would have Latin, French, German four years, Greek three years, mathematics three years, civics and economics one or more years, and English all the time. I would give a unit of credit for every study pursued continuously and successfully for one year, and a fractional unit for a study occupying less than a year—as, for instance, drawing, which may occur but once or twice a week. I would make four rather than five the basis of continuity, so that time may be left for vocal music, physical culture, and other exercises not entering into the system of recognized credits, but which are necessary concomitants of a public high school. I would make fifteen units the requirement for admission to college, not necessarily any fifteen units, but fifteen units consistent with

the principle of concentration, co-ordination, and correlation, terms which must not be ignored in this age, and which, in all their meaningful significance, should enter into the preparation of every course of study.

Granting that there is some wisdom in this idea of elasticity and continuity, we are brought at once to the consideration of how much shall constitute a year's work, and what shall be the order of studies.

Just as much credit should be given to a pupil for what he accomplishes in the fourth year before entering college as in the last year, for he spends just as much time, thought, and energy in the acquisition of his first year's knowledge as in that of his fourth year—and it is just as essential in the sum total of his preparation. One vital mistake has been made in our secondary curricula, chargeable somewhat to the celebrated and commendable report of the Committee of Ten, a mistake which must be radically remedied in the adjustment of this question. I refer to the miscellaneous arrangement of a large number of studies, running parallel and appearing in the course but two or three times a week.

This attempt to satisfy all demands, and to compel pupils to carry five or six studies, passing from one to the other twice or three times a week, is absolutely destructive of continuity of thought, conservation of interest, and promise of progress.

Pupils from fourteen to eighteen years of age must pursue their work continuously from day to day, if we would give to them that power which is the end of all study. I speak from long experience, and I know that the best teachers cannot preserve and enhance the interest of pupils in any study coming but twice a week. A study pursued five days in a week for one year is of far more value to the young pupil than the same study taken twice a week for four years.

Pupils cannot take everything in four years. Let them have that which is best suited to their tastes and aptitudes, that which they can assimilate and appropriate; for in this way only can we educate for the future.

I shall not here express my own opinions concerning the order of studies, although the subject is one of grave importance, and will require the exercise of the most generous spirit of conciliation.

In the order of historical study, shall we begin with the ancient and proceed to the modern, ending with a careful study for one year of American history, or shall we reverse the order?

In science, shall physiography as a general introduction to this field of knowledge come first, or shall it be treated in a more exhaustive manner, and follow biology, physics, and chemistry? Will it be better for secondary pupils to pursue physics two years, or divide the time between physics and chemistry, or have the choice of either or both? Shall civics be a distinct study, or shall it be an important division of American his-

tory? To what extent shall economics be a part of the secondary course? Shall we have a large number of subjects, desultorily pursued, with recitations two or three times a week, or fewer studies continuously pursued, with not fewer than four recitations a week? Shall a modern foreign language, pursued the same length of time as an ancient, be a full equivalent for the ancient? Shall we encourage the study of solid geometry in all secondary courses, or shall we generally limit mathematics to plane geometry thoroughly studied for one entire year? Should any institution for any course demand a knowledge of trigonometry? Shall the degree of A.B. be withheld from students who do not choose to study Greek, or shall not the same degree be granted to all who are worthy the benediction of the college at the end of a conscientiously conducted career of four years; or, still further, shall not all degrees be abolished save those secured by a resident post-graduate university course of two years? These are some of the questions, ladies and gentlemen, which, in connection with the printed report, you are requested to discuss this afternoon. I have been brief that you may speak at length. The issue of this great movement depends much upon your attitude toward it today, upon the plans which you formulate for our committee, and upon the final reports which we receive from the distinguished gentlemen who in all lines of study have entered into this work with a zeal which entitles them to the gratitude of every secondary teacher.

Personally I will not be discouraged, nor will I entertain the thought of defeat, for upon the success of this movement, so auspiciously begun, depends the welfare of the public high school and the very highest interests of the children of the great middle class which is the soul of the Republic.

The time is soon coming when there will not be a village in all this broad land without a high school, and may we not hope that this question will be so definitely settled, and the relations between the secondary schools and the colleges become so intimate and cordial, that no graduate of a four-years' course in a good high school shall find closed to him the doors of any college in the Republic?

DISCUSSION.

DR. NICHOLAS MURRAY BUTLER, Columbia University.—The problem of the relation existing between secondary schools and colleges is a purely artificial one. We shall approach its solution more easily if we try to examine the problem historically.

Entrance examinations to colleges were established early in college history because of the circumstances existing at that time. The colleges were without a constituency. Students, self-prepared or trained by private tutors and by unknown fitting schools,

applied for admission. A test of the ability of these pupils seemed necessary; thus the college-entrance examination was established as a means to an end. If you examine the progress of the pupil, you will find that no counterpart to this college-entrance examination is found elsewhere in his course, either at the time he passes from the primary to the grammar grade or at his entrance to the high school. It is bad psychology and bad education to suppose that there is an obstacle at the pupil's sixteenth year which can only be surmounted by an examination. I am sure that this should be done away with. A preparatory, or "fitting," school limits its work to the needs of the college that its pupils expect to attend. Work done in secondary schools in view of college-entrance requirements may not always be the best work for the pupil.

We may agree with President Eliot when he says that the colleges which have kept up their entrance tests have in such instances done much to uplift and inspire the general educational work of the country. This is a statement which, as an exception, proves the rule. In the vast majority of cases the opposite effect has been produced. For the sake of broadening college influence I would do away with the entrance tests. The colleges are doing admirable work, but not enough of it. They need more students. The public high schools will furnish them, if permitted to do so.

When Columbia became a university, in 1890, we decided that the graduate of any reputable college should be admitted on the face value of his diploma. His work after entrance would be determined by us. It would be preposterous for universities to take the same attitude toward colleges as colleges take toward the high schools. There is no reason why colleges should not receive pupils from reputable high schools without entrance tests. The objections to this come, first, from the private fitting schools, and, second, from within the colleges themselves, where the complaint is heard from certain professors that they would prefer pupils should come to them absolutely ignorant of subjects than poorly taught. This is not a real alternative, and the objection is unreasonable. You in the West must bear in mind that the eastern colleges have little affiliation with high schools, their preparatory work being largely done by private "fitting" schools.

When the Committee of Ten inquired into the condition of the secondary schools of the country, it was found that a very large number of subjects and divisions of subjects were taught. There was a tendency to allow the pupil to carry from five to eight studies for a few hours a week each, and to drag out the high-school course. This is highly objectionable. The course must be rearranged so that fewer subjects are taught and greater concentration permitted upon them. Everything must be done to make it easier for pupils to attend college. When a new college is founded, the faculty usually wishes to prepare a curriculum whose requirements differ from those of every other college, so they may show their "individuality."

A faculty should rather consider, What instruction can we best give? When we get the colleges to understand that they are not doing the best thing by isolating themselves, when they learn to feel the influence of the high school, a good work will be well begun.

The leadership in this movement belongs to the state universities of the West, and those schools which they can influence.

PROFESSOR A. C. McLAUGHLIN, University of Michigan.—I come as a representative of the Committee on History, which has in charge the mapping-out of the work in this subject. I was asked by the committee to appear here to try to awaken interest in and sympathy for the work, as only by the co-operation of the teachers of the country can much be done. Each committee feels its work is onerous, but that of history is especially so, since other subjects have been long accepted and methods of study recognized; but history has yet to find her place. We expect to map out a model programme. In order to do this well, we wish to go to the bottom of the affair, to agree as to methods of teaching, amount to be taught, when each branch of the subject should be presented, etc. To

this end circulars have been sent out to representative high schools to obtain data. A part of our committee is now in Europe studying this subject in European schools.

The great desire of the committee is to be helpful, to open broader vistas to the teachers.

It is evident that there will be a disagreement as to the order of presentation of subjects. I believe it should be treated chronologically—ancient history in the first year, mediæval in the second, English in the third, and United States in the fourth. The vexed question of general history will present itself. This resolves itself into the question as to whether we shall take the history of one nation for the period from the fall of Rome to modern times, or study that period by episodes. The teacher who knows what he has to teach and has high ideals will teach wisely.

I do not see how English or American history can be taught without that of constitutional development; hence civil government may well be presented in connection with the history of these two nations.

PROFESSOR H. MORSE STEPHENS, Cornell University.—I happen to be the man who named this committee, and thought I had done well, and that my work was finished, until I heard at the New York meeting that I also must serve on the committee. We wish to have this committee embrace secondary as well as college teachers. If we can awaken interest in the subject among secondary teachers, we shall do much.

I deprecate the teaching of history with political economy. History is a jealous mistress, not a hand-maid. When treated as subordinate, the teaching of history is bad teaching.

One danger which threatens us is that we may be accused of teaching some special faith; but if the teacher of history have an enthusiastic love of his work and a proper reverence for the subject, he may be trusted. Let my closing counsel be, Separate history from economics.

PROFESSOR B. A. HINSDALE, University of Michigan.—I wish, in the first place, to say that I did not understand Professor McLaughlin as Professor Stephens did. History must be taught with reference to a co-ordinating of materials. Bushels of facts do not make history, material must be organized around some nucleus, arranged with reference to the institutional facts of countries, of races, and of the world. I think this is what Professor McLaughlin meant.

Let me ask this important question: What have been the prevailing tendencies of educational thought in progressive parts of the world? I believe this question should be studied carefully, thoughtfully, reverently. Let us notice first in these tendencies the democratizing feature. I might speak of the secular tendency or of the scientific tendency, but I wish to mention especially the catholic tendency of this age. A movement may be discerned at present to attempt to deal with the present need of mankind.

Anyone who has given much attention to the subject has noticed also the changing conditions. In the eastern states, under the old régime, colleges had their own fitting schools, which did just such work as the colleges required. This is largely the case in the East still, although all over the country the colleges are beginning to cast off their fitting schools; and this is due to the democratizing influence of the day. The establishment of public schools has brought this about. The situation is this: institutions now depend upon the public high schools for pupils. This is a very important fact; especially in the West do the colleges and universities rest upon the public high school as a basis.

There are two points of view from which the high school may be considered: first, it is a finishing school for those who go no farther, called the "people's college;" second, it is a fitting school for the college or university. The question arises as to whether the same school which is best for one is also best for the other. We are confronted by this

as a situation, not as a theory. College men should ask themselves, How far is it possible to use these schools for our purpose? Dictation from either side is wrong. Careful study of the subject from both sides is necessary in order to make the high school the best finishing and also the best fitting school.

PROFESSOR CHAMBERLIN, The University of Chicago.—As teachers we consider the individual too much, the community too little. We cannot bring the community into school, so we must send educators into the community. The question may arise as to whether we shall tax the community to educate individuals, but we can never question the right of taxing the community to educate itself. Again, if we send into the community persons who are diversely educated, we are educating the community along the different necessary lines. If we send out those who are enthusiastic for history or science, we are doing more good to the community than if we send those who are poorly educated or half-educated in many subjects.

A phase of the report which I especially like is the tender regard which is shown to the younger subjects. The committee has done all that it could to give these younger subjects opportunity to grow. The beauty of the entire report is that it has considered all subjects which need our attention.

PRESIDENT CANFIELD, Ohio State University.—This subject comes to us with many phases. First, the money which supports our educational institutions comes from the taxpayers, to whom we have a duty to perform in explaining how wisely we have expended their money. The public demands, and rightfully, that we give to its young people ability to satisfy the reasonable demands which are made upon them. Under these demands we consider, first, ability to live independent of the community; second, ability to think well; every man desires to be able to square himself with other men; third, every man desires to do something which shall remain after him. We must set him right at the start, that he may be enabled to do for himself the best possible.

PRINCIPALS' ROUND TABLE.

1. *Is it desirable and possible by better correlation of studies and closer articulation between the grammar and high schools to fit students for college at sixteen or seventeen years of age?*

MRS. HELEN E. SCARRETT, Scoville Place School, Oak Park, Ill.—The evident reply to the question, "Can students be fitted for college at the age of sixteen or seventeen?" would seem to be, "It can be done, for it has been done." Scores of instances can be given, many of them in the case of eminent men and women of our own and former times, where preparations for college have been accomplished at even an earlier age. Longfellow graduated from college at the age of nineteen. President Harper of The University of Chicago graduated from Muskingum College at the age of fourteen, spent two years out of college, and then graduated from Yale at the age of eighteen.

It will, of course, be objected by those who do not believe that such early preparation is desirable that these and other instances of successful early preparation for college are exceptions, and to be accounted for by the exceptional mental maturity of the students. They will say, as did the president of Leland Stanford University, when asked if he would advise sending a girl to a co-educational college: "It depends on the girl." Whether a student can be fitted for college at the age of sixteen or seventeen depends

upon the student himself. The great differences in mental maturity, habits of study, and early training between students of the same age all must admit; nevertheless, I must give it as my opinion that by careful, thorough, and systematic work students in general can be fitted for entrance to college at the age of seventeen, and in many instances at sixteen.

Leaving to others the discussion of the necessary co-ordination of studies and of the relative amount of time to be devoted to the mathematical, linguistic, and other branches required for admission to college, I wish to emphasize especially two things which seem to me essential factors in successful and adequate preparation for the years of college life. The first of these is the systematic division of time in the hours given to study and the cultivation of the habit of concentrated attention during these hours. Much time is wasted by pupils in the golden years between thirteen and sixteen in a kind of mental dawdling. Lessons which might be learned in an hour, did the pupil but concentrate his attention, are allowed to occupy at least two hours. To teach a student to work when he works and to play when he plays is to equip him with mental habits that will be of the greatest value to him throughout life. Our duties in life are like articles of apparel or other material belongings. Left lying around in disorder, they seem to fill all space, but arranged and packed in a systematic and orderly manner, they take up a comparatively small portion of either time or space. This disposition to orderly and systematic apportionment of time is seldom found in the pupil as a natural faculty; hence it must be cultivated by those whose duty it is to superintend his work.

It is for the lack of this systematic division and use of time that so many students preparing for college drop from their curriculum music, general literature, and history of art. To my mind the loss of these factors in the education of the young mind is an irreparable one. Professor John Dewey has well said that the tendency to regard the æsthetic studies as only the frills and luxuries of education is a most deplorable one. To lose these elements of the higher education is to rob life of its keenest and purest sources of enjoyment. I care not how much nor how many of the "information studies," as they are called, have been packed into the mind: that student is imperfectly educated who has left out of his curriculum the study and the practice of those elements of education which teach him to feel. The student who reads so little of good literature that he comes to the reading of the English classics required for college as to a dreaded task is shut out from one of the purest sources of human happiness. The student who has given so little time and thought to observation and study of the beautiful that he does not recognize beauty when he sees it, either in nature or art, knows not of the world of pure enjoyment from which he is debarred. And yet, in the hurry and rush and often unsystematic work of preparation for college, we principals of secondary schools too frequently allow all this neglect and destruction of the finest elements of life to go on, scarcely daring to lift our voices in protest, because the "information studies" must be finished if our student is to be accepted as ready for college.

Some modification of the entrance requirements for college, it seems to me, is desirable in order to give more time for these æsthetic necessities, if we would develop the pupil into a harmoniously rounded mental and spiritual maturity. But that it is possible, by a systematic division of time and careful arrangement of hours of study during the preparatory period, to carry all these departments of preparatory education to a successful culmination at the age of sixteen or seventeen years both experience and observation lead me to believe.

PRINCIPAL E. W. COY, Hughes High School, Cincinnati, O.—There are two points to be considered in this discussion: First, is it desirable to fit pupils for college at the age of sixteen or seventeen? My impression is that it is doubtful. College work requires greater maturity of mind than the average sixteen- or seventeen-year-old youth possesses. Secondly, the education of a boy begins at six; ten years might seem enough for college

preparation, but is it practicable to shorten it? The majority of our pupils are not expecting to go to college, hence, as their life training is to be obtained in the high schools of the country, to shorten the amount of required work would be to defraud these pupils of what is due to them. I think something might be done by condensing the work below the high school, yet I doubt the advisability of hastening.

PRESIDENT THURBER.—That great bugbear, the "people," frightens us sometimes. This "people" thinks we keep our boys and girls too long in school, consume too much time in preparing for life. This question is, therefore, of utmost importance.

PROFESSOR A. P. BRIGHAM, Colgate University, thought that here as elsewhere the golden mean is desirable. While a few boys would be able to enter college at sixteen or seventeen, he thought eighteen was a better age for the average youth.

SUPERINTENDENT T. A. MOTT, Richmond, Ind.—I have been much interested in this discussion. I agree in part. In the discussion of the morning very lofty ideals were presented. The boy who is able to reach these ideals must have gained the maturity of at least eighteen years.

I believe we may by means of the nature work in the lower grades remove the need of physical geography in the high school, and by our grade work in algebra and geometry shorten the time required for these studies in high schools.

SUPERINTENDENT J. A. TORMEY, Winona, Minn.—Of the fifteen thousand names which have become eminent in the history of our country a great majority have been those of college graduates. The important thing is that the boy go to college. While it may not be desirable for men to enter the profession before their twenty-fifth or twenty-sixth year, it is highly desirable that they receive college training before entering their professional schools. Objections to college training are made on the score of lack of time. If we could gain some time, might we not send more men to college?

PROFESSOR G. N. CARMAN, Director of Lewis Institute, Chicago, Ill.—Of course, it is possible to enter pupils at sixteen or seventeen, if it is desirable, and it seems to me that it is desirable, for the reason suggested by Superintendent Tormey. Business men will not go to college because it is so late when they have completed their preparatory course. We must not think the pupil is made for the school, but the school for the pupil. All the trend has been toward lengthening instead of shortening the time of preparation.

2. What effect has the study of algebra and geometry in the highest grammar grades upon the work done in the high school?

PRINCIPAL W. H. SMILEY, High School, Denver, Colo.—For the purpose of securing the opinions of those superintendents and principals of high schools and grammar schools whom I had reason to believe had made trial of these subjects in grammar grades, I asked the following questions of twenty-five different persons, receiving answers from twenty:

1. How much time do your schools give to each of these subjects in these grades?
Algebra? Geometry?

2. If geometry is not taught as a separate subject, to what extent and in what form is it correlated with other subjects?

3. Is less time given in the high school to either subject because of this instruction?

4. If the same time be given, is the quality of the work improved and the ground covered greater?

5. Have you noticed any increase in power on the part of students in other work because of this instruction?

6. Have you noted any loss of interest or other ill effect upon these subjects in the high school because of this elementary instruction?

7. What value, as elementary subjects, do you attach to each study, for those who do not intend to enter the high school as well as for those who do?

As indicative in a general way of the standing of those from whom answers have been received, I will mention Principal Huling, English High School, Cambridge, Mass.; Superintendent Balliet, Springfield, Mass.; Principal Atkinson, High School, Springfield, Mass.; Superintendent Dutton, Brookline, Mass.; Principal Coy, Hughes High School, Cincinnati, O.; Superintendent Speer, Chicago, Ill.; Principal Rockwood, Marquette School, Chicago, Ill.; Principal Buchanan, Boys' Classical High School, New York city.

While the number from whom replies were requested is not large, yet, if multiplied, I doubt if the inferences that might be drawn would be different, or more conclusive. The whole movement is still experimental, and several of those on whose judgment we habitually rely affirm that it is too soon to draw sound conclusions. That the experiment is tentative is furthermore indicated by the extraordinary variation in time allotment, which varies for algebra from five months to three years, and from one hour per week to three hours per week. For geometry only three schools make report; one gives ten weeks length of time per week unspecified; one gives two hours per week for two years; one gives five periods per week for one year, divided between algebra and geometry in the ratio of 3 to 2.

The answers to the question regarding the correlation of geometry with other studies were disappointing because of their meagerness. Much true geometrical instruction is certainly given in many schools, though the replies would not so indicate — in kindergarten work, in geometrical problems, in mechanical drawing; and in arithmetic wherever Superintendent Speer's arithmetical system is employed; the fundamental postulate being that no rapid, intelligent handling of abstract numbers is possible, unless the sense-perceptions are thoroughly drilled in the handling of concrete geometric space units in all their relative relations. All that a teacher who has been trained in rote methods of handling abstract numbers needs to be convinced of the value of such concrete inventional geometry is to see little fellows in the fourth grade easily outstrip him in the rapid and understanding solution of problems which he himself can perform only by the slower abstract methods of his boyhood. By the answers to this question I expected to find it shown conclusively that geometry adapted to children in the lower grades is much more valuable than algebra, both for discipline and for information. I regret to state that several principals seem not to conceive that geometry can be attacked in any other method than by the deductive learning of theorems and demonstrations.

The replies to the other questions, therefore, refer for the most part to algebra. All agree that the amount of time given to the subject in secondary schools is no less, and about one-half think that greater efficiency is secured. Some have noted increased power in other subjects, because of better habits of work formed in these mathematical subjects. One-third have noticed an increased interest in these subjects when continued in the high school. One only has noted loss of interest — "because," to use his own words, "poor teaching of the high-school subject in the grammar school gives a distaste for that subject. When these subjects are uniformly and properly taught, I shall attach considerable value to them."

As to the question of such subjects being of value to all pupils, regardless of the fact that only a small percentage of the pupils of the elementary schools will reach the high school, I regard it as an unfortunate sign that some see little value in algebra for those who do not continue on to the high school. As regards geometry, the opinion is all but unanimous that the subject has great value, both from the point of view of discipline and the practical value of its subject-matter; this in face of the fact that 90 per cent. of the schools are experimenting with algebra and only 10 per cent. with geometry.

PRINCIPAL O. S. WESTCOTT, North Division High School, Chicago, Ill.—We are attempting to discuss a subject five years in advance of history. We can only give our views as to what will be accomplished if this work is carried on. Such a book as that issued by Professor Hill in geometry would surely be very helpful if carried by grammar grades. The danger will always be what it is at present, namely, the grade teachers are not prepared to teach the subjects properly, and there is so much already which must be done in the higher grammar grades that we wonder where the time for all is to be found. We have tried algebra and geometry in the eighth grade for two years. Early last fall I asked my teacher of mathematics in the high school how she found the pupils who had had the training of the previous year in comparison with those who had not. She replied that they took the work up more readily. But when I asked her again in June, she replied that she preferred that the grammar grades let the work alone. I agree with her.

Our pupils are not ready for college before their eighteenth or nineteenth year. Perhaps, if the pupils were older, we should have less trouble with hazing and kindred evils.

PRINCIPAL W. J. PRINGLE, Aurora, Ill.—It seems to me that the air which we breathe this afternoon is of a conservative quality. Cane rushes are not the worst things, although there are better things. I think something should be done to enter our boys in college earlier. Is there a waste in grammar or high school? I think there is. There is a notion that a boy could do more work before he enters college. It seems to me he might, if he were hurried along a little faster. I also believe in more freedom in the high school. Teach self-control, and thus prepare the boy for college life.

SUPERINTENDENT L. H. FORD, Owatonna, Minn.—Economy of time is economy of life. We owe it to our young people to economize their lives, but we cannot do this by forcing their growth. Nature requires time; let us not hurry our pupils so much that we shall have forced natures as a result. There is no question but that concrete geometry should be taught in the lowest grade; the same is true of algebra and of the sciences. We have had algebra in the eighth grade two years, and have found it successful.

As to the previous question, I should say it is neither desirable, nor practicable, nor possible, to prepare pupils for college by the time they are sixteen years old.

SUPERINTENDENT H. A. WISE, Baltimore, Md.—Many of our college presidents desire that we send them our boys at an earlier age than we do. I believe, by enriching the grammar course of study, a boy might be prepared for college at sixteen or seventeen. In Baltimore algebra is taught in the sixth, seventh, and eighth grades, and geometry in the seventh and eighth, with satisfactory results. Why not introduce Latin, French, or German instead of so much work in English? Would not time be gained and English improved?

A. F. NIGHTINGALE, Superintendent of High Schools, Chicago, Ill.—I believe the higher grammar-grade teachers do as good work as the high-school teachers and the high-school teachers as good work as the college professors. We are too much in the habit of laying the blame upon the teachers of any or all other schools than our own. We should stop this complaining; we waste time and energy, and delay progress. I believe the subjects taught in the universities and colleges should be begun in the lowest grades, in a manner, of course, adapted to the appreciation of the child; but the great trouble is that we have been enriching the grades by piling in for a long while, while we have taken nothing out. The result is that the grammar grades are congested. If we should spend less time on political geography and technical English, we should have more which might be given to physical geography and Latin. Abridge as well as enrich. By introducing algebra into our eighth year we saved during the first year of its trial three weeks

in the ninth year, and after another year's trial we saved six weeks in the ninth year. I expect it to do more in the future.

3. *Should the high-school principal be given a voice in selecting his assistants?*

SUPERINTENDENT HENRY P. EMERSON, Buffalo, N. Y.—At first reading it seemed to me that there was but one answer which could be given to this question, for it is so obviously true that the principal should have a voice in choosing his assistants that it need not be discussed. If the principal is large enough to be a principal, he is large enough to choose his assistants. There is no doubt that in the average case the principal could do better than his superintendent, but we may expect the best results when he acts conjointly with the superintendent.

I have known one principal who chose those teachers whom he could easily manage; in such a case it would be unwise for the principal always to do his own selecting. High-school teachers should have opinions of their own; they should be men and women of character. But, if the principal is large enough for his position, I say again, he is large enough to choose his own assistants.

PRINCIPAL J. REMSEN BISHOP, Walnut Hills High School, Cincinnati, O.—The question may arise as to why it would be well to allow the principal this power. I think one reason is, the principal is much less subject to political influence. If he were allowed to nominate his assistants from such candidates as he knew to be best suited to fill the place needed, much of the evil of political wire-pulling would be eliminated from the high-school work.

Again, the principal knows better than anyone else just what sort of person will best fill the place and do the specific work which he desires.

SUPERINTENDENT H. A. WISE, Baltimore, Md.—I think this is a delicate question. In Baltimore we have done much to eliminate the political influence below the high school by having a civil-service list, and giving the positions to the candidates in order of proficiency.

PRINCIPAL E. W. COV, Hughes High School, Cincinnati, O.—I do not like the civil-service list; so much that enters into the making of a good teacher cannot be ascertained by a written examination.

PRINCIPAL HENRY S. PURDY, Brewster, N. Y.—Most of the high schools of our country are under a different organization from those mentioned. The teachers are elected directly by a board of education, instead of being chosen by the superintendent. Even in these cases, though, I believe a broad principal will make himself felt, so that his wishes will be consulted.

ROUND TABLE IN LATIN AND GREEK.

1. *Are not college-entrance requirements pitched too high?*

PROFESSOR GEORGE M. SMITH, University of South Dakota.—Differences of opinion arise from different points of view. Some schools wish to fit a few well; others to do as much as possible for the many. It is a mistake to continue raising the requirements for admission to college. We are overloading pupils' minds with information instead of

giving them culture. We should keep our secondary education as near the masses as possible.

PROFESSOR C. W. SUPER, Ohio University.—Who is to set the pace, the college, the high school, or the community? In some particulars the requirements are too high, in others too low. Put Latin and Greek more largely into college courses, and give more time in high schools to English branches. I doubt the wisdom of requiring any modern languages for admission.

PROFESSOR RICHARDSON, East St. Louis, Ill.—Pupils have been defrauded of their birthright, the right to a high-school education, by being coerced into taking Latin in first year; failing, and having to take the work over, they drop out of school. Begin Latin in the second year, and give only three years.

PROFESSOR W. H. SMILEY, Denver, Colo.—Quantity is less than quality of work. Encourage all pupils to take some work that shall give the culture so much needed in the determination of the social problems which are pressing upon us. Let the colleges concede something to the public good.

2. Is there any better test of power and proficiency in English than a twofold translation?

PAPER BY PRINCIPAL WILSON FARRAND, NEWARK ACADEMY, NEWARK, N. J.

I have been asked to answer this afternoon the question, Is there any better test of power and proficiency in English than a twofold translation? I apprehend that there is more in this question than appears on the surface. The words deal simply with the testing of power and proficiency, no matter how attained. We are more concerned, however, with the best means of attaining power and proficiency than we are with the best means of testing our work. And yet the ultimate test to be applied largely conditions our work. I assume that the question refers mainly to the test of fitness for admission to college. If the college-entrance test is to consist of a twofold translation from Latin, or Greek, or German, it must inevitably affect the work of our schools. And it is right that it should. For I hold that it is an axiom, a self-evident truth, that college requirements should be so framed as to guide and direct the work of the secondary schools. It seems to me, then, that an adequate answer to the question presented to us this afternoon must also answer the question, What is the value of the practice of twofold translation in developing power and proficiency in English?

The first proposition that I have to lay down is that twofold translation is an extremely valuable aid in increasing a pupil's command of English. It helps his power of expression in three distinct respects. First, it increases his command of words. The habit of considering and choosing the best possible word to express the exact shade of meaning intended by the author cannot fail to produce an enlarged vocabulary and an increased discrimination and refinement in one's diction. Secondly, the practice of twofold translation gives most valuable training in

the use of equivalent or alternative expressions, and thus induces flexibility and variety of language. I am inclined to think that it is in this direction that its greatest value is to be found. In the third place, it forms in the pupil the habit of criticising his own work, of looking at his own expression with reference to its accuracy, its clearness, its precision, its harmony. I am not sure that it would not have been wiser to call this developing of the critical instinct the most important function of twofold translation. When I think of the flood of bad and slipshod English poured out upon our boys and girls in the street, at home, and in the press ; when I think how sweetly and calmly they assimilate and reproduce the worst models ; when I recall how often they say, when we point out arrant errors in their writing, "I don't see anything the matter with it ;" when I think of these things, I am sometimes inclined to feel that the first requisite to securing power and proficiency in English is the development of an abnormal critical instinct.

We are safe, I think, in assuming the substantial truth of this first proposition that twofold translation is a most valuable exercise in English. But side by side with this must be placed another, that, valuable as this practice is, it is still inadequate. We are all probably prepared to admit that translation from foreign tongues by itself would hardly give all the training in composition needed by our pupils. It may pay us to consider the question of just where it would fall short.

In the first place, it fails to give a clear grasp of the principles of English sentence structure. One of the most glaring faults of the "school English" of the present day is in the line of defective sentence structure. Loose, rambling, disjointed, sprawling sentences are only too characteristic of the pupils' writing, even in many of our so-called "best schools." Something more than mere imitation is needed to produce the desired result. Knowledge is imperative. Latin and German sentences, too, are constructed on fundamentally different principles from those of our own tongue, so that they are not the best models for imitation. Some tentative examination of the work of classical pupils who have had little specific instruction in English composition has shown a distinct tendency toward looseness and weakness of sentence structure. Do not misunderstand me. I am not arguing that the study of Latin and Greek has a bad effect on English style. I am simply trying to point out the fact that, admirable, I had almost said, invaluable, as is the effect of classical study on one's handling of the vernacular, it is not sufficient ; there are some things it does not do, some points in which it must be supplemented.

Sentence structure is one of these points, and another is the use of the paragraph. Nothing has been more significant in the rhetorical field of late years than the tendency to lay increased emphasis on the paragraph. Many of our soundest teachers hold that the true method of

teaching English composition is to make the paragraph the unit, and to treat sentences and words as component parts of the larger whole. Be that as it may, there is practically no dispute as to the importance of the ability properly to construct an English paragraph. And that ability is not imbibed indirectly through the process of twofold translation.

There is still another point to be considered in this connection, and this, after all, is the vital point. Composition does not consist in precise diction, in deft phrasing, nor even in clear and vigorous sentence formation. Nor does it consist in the expression in our own tongue of thoughts that were uttered in another. It consists in the formation of ideas that have shaped themselves in our own minds. The purpose of composition is the expression of one's own thoughts. Translation is an excellent gymnastic. The following the thought of a great mind, the attempt to express in English the idea that was first formulated in Latin or Greek, must make it easier for one to express his own thoughts. It is excellent gymnastics, but, after all, it is only gymnastics. The gymnasium and the rowing machine are excellent, but one learns to row better in a boat. Translation is admirable, but one learns better to compose by the practice of composition. Efficient as translation is, effective as the practice of twofold translation is, it is yet not sufficient. It must be supplemented by study of sentence formation and of paragraph structure, and by practice in the expression of one's own ideas.

The study of Latin and Greek is believed by many of us to be one of the most valuable instruments of modern education. We find many reasons for the faith that is in us. Not the least of these reasons is the increased command that it gives one over his mother tongue. I am prepared to maintain the truth of the principle that the classical student needs less formal training in English than his fellow who studies neither Latin nor Greek. Side by side with that, however, I lay down the principle that formal work in English can never be wholly superseded by work in the classics. Latin and Greek may be so taught, and should be so taught, as distinctly to increase the student's command of his own tongue. The better they are taught, the less will be the need of studying English grammar and rhetoric; but if the student is to develop to its full extent the power to express his own ideas, there is imperative need of something more than translation alone.

I have stated, and have endeavored to maintain, two propositions. The first is that exercises in twofold translation are of great service in increasing a pupil's command of English, particularly in regard to the choice and use of words, and in regard to accurate and harmonious phraseology. The second proposition is that, excellent as these exercises are, they are inadequate, in that they give but little training in sentence formation, and none whatever in paragraph structure or in the expression

of one's own ideas. From these two corollary propositions may be deduced without argument. The first is that a twofold translation is an excellent test of a pupil's diction and of his ability to handle subordinate phrases and clauses. The second is that it does not adequately test his control of the sentence, and fails to show anything whatever of his ability to construct a paragraph, to arrange his thoughts in logical and forcible order, or to express his own ideas in clear, accurate English.

On these grounds, and without considering at all the interesting problem of how far a pupil's English in translation is affected by his inability fully to grasp the meaning of the original, I am prepared to answer in no uncertain words the question that has been propounded: Is a twofold translation the best possible test of power and proficiency in English? No; for it fails to test the command of certain fundamentals of composition, and shows nothing of the power to arrange and to express the thoughts of one's own mind. Is there any better test of power and proficiency in English than a twofold translation? Yes; the orderly arrangement and expression, in proper literary form, of the pupil's own ideas on some subject well within his mental grasp.

PROFESSOR MANCHESTER, Illinois State University, called attention to the opportunity for correlating English and Latin.

PROFESSOR C. W. SUPER, Ohio University, Athens, O.—Pupils may be able to express their own thoughts in good English, but not able to express the thoughts of others. How shall we explain the fact that the study of Greek and Latin in Germany almost destroyed the writing of good German, and in England produced the greatest period of literary activity?

MISS LEWIS, of Iowa.—If pupils give literal translations, they are not able to give free translations; but if they give free translations, I doubt whether they understand the constructions.

MR. HEALEY, of South Dakota.—Should we not aim to bring pupils into the spirit of the Greek, not destroy it by Anglicizing it?

MR. VOLLAND, Grand Rapids, Mich.—Literal translation is detrimental to the production of good English. Let the translation be altered to make an exact expression of the meaning of the Latin.

PRINCIPAL SAWYER, Minneapolis, Minn.—Is the object to increase the stock of synonyms, or to give greater power to composition?

PROFESSOR SMITH, University of South Dakota.—If we are to have translations at all, they should be into correct English. If we do not have translations made, pupils should be taught to think in Greek and Latin.

3. Is it time for Greek composition to be discontinued in preparatory schools?

PAPER BY PRESIDENT W. E. WATERS, WELLS COLLEGE, AURORA, N. Y.

The question which is before us for discussion touches upon the not infrequent problem of the teaching of Greek. Presupposing, however,

that Greek has its legitimate place in the curriculum of secondary schools, the question now before us is, more precisely: "What about the practice of writing English into Greek, or what we commonly call Greek prose composition? Can we not dispense with it and put the time usually devoted to it upon something else with greater profit?"

The raising of the question here must be based on the fact that in the minds of a great many teachers considerable doubt exists as to the necessity or the expediency of giving Greek prose composition the place which it has, and which it is claimed it should have. It is felt that the discipline and culture that are derived from the study of the classical languages in the schools, and, notably, from the Greek, must be seized by the pupil with no waste of time at all. The great majority of those who study Greek in the schools do so in preparation for college. And requirements for admission being continually raised, and entrance examinations being made more and more severe, and even the high schools and preparatory schools themselves offering so many attractive courses that tempt—and tempt successfully—the pupil whose strict duty it is to prepare himself for college, and whose labors with Greek grammar are certainly for that purpose, as I have just said—there is a feeling that, if anything is old-fashioned or of minor or evanescent importance, it should be cleared out, or forced out, from the curriculum. I hear some one inquiring: "Is not that the case with Greek prose composition? Can we not, by eliminating it from the curriculum at the same time that we carry out certain further changes, introduce a new requirement, or bring some other requirement into prominence? Can we not cut down the time devoted to Greek from three to two and a half years, or even to two years?" I hear some one else inquiring: "What is the value of the study after all? Do we not tolerate or advocate the study of Greek in order that pupils may acquire facility in the reading of Greek? What, pray, then, is the use or propriety of our pupils' reversing the process and trying (and, at best, trying with only a great deal of failure and uncertain stumbling) to read their thoughts into Greek?" Some one else inquires: "Is it not something like impudence to assume to acquire the ability to write Greek, a thing which we ought to know that only a Greek himself can do, one who has the language as his mother tongue, and has absorbed the grammar from his infancy?" Another says: "Greek prose composition? fie! what value do the colleges put on it? If the pupil can pass his entrance examination in Xenophon and Homer, or bring a certificate that he has read the required amount in two authors, that is often the end of it. They make little or no further inquiries about his grammar and prose composition." I suppose, too, that there are further positive or interrogatory objections to it, which may come out in the discussion of the subject. I will not consider these objections in order, but will proceed at once to

express my judgment as to the place and value of Greek prose composition in the curriculum of secondary schools, where boys and girls are being prepared for college, and then criticise the attitude of the higher institutions towards this, a regular, but a variously valued, requirement for admission.

Greek is studied in the secondary schools entirely as a preparatory discipline; Xenophon's "Anabasis," in order that the beauties of Attic prose may be unveiled to the pupil when he enters college; the "Iliad," in order that Homer and all the forms of Greek poetry may be appreciated in college. There is no cultural value at all intended in the study of the "Anabasis," though many admirable teachers do feel for it and do incidentally make their pupils find it. With regard to Homer, the case is different. No one can read five lines of him understandingly without feeling at once that his æsthetic sense is being appealed to. Yet I maintain that the study of Homer is primarily a drill by which the pupil is to be enabled to read the poet, and other poets, rapidly and easily in college. It is because some schools have found time to give a cultural value to the study that the cry has been raised that the time given to it should be cut down.

Now, there are no better proofs that a pupil has been successful in his preparatory work with a language than these: (1) That he can pick up a bit of the printed literature of that language (not a difficult bit necessarily) and show that he is able to interpret its sense correctly; (2) that he can express some of his ordinary thoughts in the vocabulary and idiom of that language, and (3) can derive some correct notion of what people are saying when he hears that language employed either in conversation or in public address. The test and proof do not rest in the certificate or the mere complacent consciousness that he has read so and so much, but in his demonstration of the fact by the actual use of the language, in some way or other, whose literature and grammar he has been studying. Now, Greek prose composition affords one of these tests. It is just like French prose or German prose composition. And who would think of suppressing *them* in the study of French or German? They imply and require the possession of a knowledge of the greater portion of the grammar and the idioms of the language studied.

"Ah, but then," you say, "what will be the use of the 'Anabasis' at all? Why not limit your pupils at once to your word lists and your grammar lessons?" I reply that that would be proper enough, if the reading of the literature of the language and its proper interpretation were not also a requirement, and, indeed, *the* requirement. And to meet this, there must be constant reading of original texts. This is the only way, of course, to understand any Greek author's style, or the general Greek style. But Greek prose composition is the test whereby is made

sure that the pupil has some preparation for understanding an author's diction and vocabulary and the flexibility of the grammar of the language.

The difficulty with the subject is, as I am aware, that it is frequently taught poorly. Instead of coming in at each exercise or recitation as an organic part of it, it is relegated to a fortnightly hour. The "Xenophon" is laid aside then, and a wrestle goes on with certain features of Greek *grammar*, through the medium of a certain circumscribed vocabulary. It would be far better to consolidate the common parsing drill, which constitutes a kind of aftermath to each recitation, with some serious exercise in Greek writing. That is, let the translation be, as it always should be, an exercise in the interpretation of the author's style and meaning into good, acceptable English. Let there be reviews and advance. But let this portion of the exercise be completed within twenty to twenty-five minutes. Let all the novelties of form and construction occurring in the lesson be investigated, as matters for an explanation of which the pupils understand they are accountable. Then, instead of that heavy drill which follows, and upon the sharpness and thoroughness of which many a teacher has made his reputation, with here a mode and there a case, let there be some exercise in the vocabulary and in the essentials of the grammar, as the pupil sees them in the author he is reading, by the putting of English into Greek. Who will deny that *this* may be a most searching drill, and a test of how much of the dictionary of the language and of its grammar the pupil actually has in his head and at his command for successful work in college? It is, in fact, the same test we first and naturally employ in ascertaining how much of a modern language a person possesses. A young man fresh from his second or third year at college tells his father that he has been reading and studying such and such an author. "Oh, have you? Then how would you say or express such and such an idea in your French or German?" And if the young man stands the test, then the hope is warranted that he understands the language—at least to that extent. The purpose of Greek prose is to show, not that a pupil feels with his authors, but that he has reached a certain emancipation from the dictionary, commands the essentials of inflections and of constructions and of style. It is, in my opinion, the best way in which he is going to prove to his college instructor that he is not likely to prove himself a bungler.

And now I admit my belief that colleges have been slow to put this high value upon Greek prose composition, and that their failure to do so largely accounts for the feeling that it might as well as not be dropped out of the curriculum of the secondary school. Not all colleges, however, have been slow; some have, and others have not. It is, then, the lack of a uniform recognition of the value of the subject that creates the willingness to drop it from the established curriculum. Let me

quote from a few statements made by certain colleges regarding their requirements in the subject under consideration. After I have finished my quotations, it will be seen how vague and uncertain is the general value attached by the general college to the study of Greek prose composition as a subject in Greek examinations.

Harvard College divides its subjects for admission into elementary and advanced. If the applicant includes among his subjects elementary Greek, it is simply recommended that he shall have been accustomed from the beginning of his preparatory course to translate both orally and in writing passages prepared by the teacher on the basis of the prose authors read ; that is, his Greek prose is only a recommendation, not a necessity. He must be able merely to translate at sight simple Attic prose and stand questions on the usual forms and ordinary constructions of the language. If he offers Greek and Latin composition as one of his advanced studies, it is only then that he must have a thorough and persistent training in prose composition.

For admission to Yale the case is greatly different. Not only is Greek not an elective requirement, but it is required of all applicants ; and of the examinations in Greek the authorities of the college consider most important those in Greek grammar, translation at sight, and composition, and the papers in them are read and marked with special care and strictness. A candidate who shows marked proficiency in these subjects is not conditioned for slight deficiency in "Xenophon." The passages set for translation from English into Greek call for acquaintance with the vocabulary and style of simple narrative. And teachers are advised to connect exercises in Greek composition, both oral and written, with all the Greek studies of the preparatory courses. Probably no college is so stiff in its requirements in Greek composition as Yale is. And were all colleges equally insistent, there is no doubt that composition, instead of finding a less importance in the secondary curriculum, must find a greater.

At Princeton nothing more is looked for in Greek composition than that the graduate of the secondary school who applies for admission shall be able to write simple sentences in Greek, in an easy continuous discourse based upon Xenophon's "Anabasis," the purpose being to test the candidate's knowledge of accent, inflection, and the fundamental rules for the syntax of the noun and verb—a purpose which can be just as well accomplished by an examination in the grammar. Were we instructed in the secondary schools to fulfill in our Greek prose work the simple purpose as enunciated in the Princeton requirement, I confess we might with ample reason drop the prose work altogether ; Latin composition has, however, the same dignity as a requirement for admission which Greek prose has at Yale.

In Columbia College Greek prose composition is considered a mere appendage of Greek grammar; there is no separate examination in it; and any candidate is considered to be properly prepared in it who has covered Jones' exercises in Greek prose composition—exercises which, in my opinion, teach but little of style (and, really, composition that does not teach a narrative style is not doing its full work). Prose composition must be more than exercises for drilling grammar into a student to the tune of a Procrustean vocabulary.

Turning to the Chicago University, we find that our secondary schools are expected to do a stricter and more advanced work in the subject in properly preparing pupils for the junior college; for there are two examinations in the subject, the first in connection with the grammar, and the sentences are not easy, but "are of average difficulty, and based on the 'Anabasis.'" The second examination is on the translation into Xenophontic Greek of a connected passage of idiomatic English. The "Register" of the university distinctly states that the special object of the elementary requirement in Greek prose is to test the pupil's knowledge of the elements of Greek style, as well as of form, syntax, and vocabulary. For The University of Chicago requires the securing of such facility in the reading of Greek that the college course may be devoted mainly to the study of literary form and of Greek life and thought as reflected in Greek literature. The requirements, therefore, of Chicago and Yale are high in the matter of Greek composition.

I have time to cite the expectations of but one more institution—the University of Michigan. Here, as in one or two of the institutions I have named, the requirement in composition (Jones' exercises, with special reference to the writing of Greek with the accents and to the general principles of syntax) appears to be so slight that it seems possible to include it under the grammar requirement, which is merely the thorough mastery of the inflections.

I have done enough, I think, to make the point clear that there are two distinct attitudes held by the higher institutions with regard to the value of prose composition. Perhaps we might say that the highest value is attached to it by Yale and Chicago, while the other institutions which I have named appear to attach to it a varying and lower importance. My own attitude I stated in the earlier part of my paper. It is because of this very evidently unsettled attitude of the colleges of the land toward the requirement in Greek prose composition that the question is natural: "Why hold on to it in the secondary schools, when there are so many other subjects that might be brought to pupils in preparation for college upon whose value at least all secondary schools are agreed?" But, in all soberness, let us first ask which of the two college attitudes is the right one? Are Yale and Chicago wrong, or are they right? Per-

sonally, I have no doubt that they are right, and that a very significant value may be given to the discussion of this matter of Greek prose composition, if this association could go before the colleges and say: "Gentlemen, it will be a great boon to the cause of the secondary curriculum if you could come to some agreement, and report that agreement to us regarding the importance of Greek prose composition, and the objects you think it feasible to attain by means of it."

PROFESSOR FRUESDALE, Lake Forest Academy.—The best test of a student's mastery of a language is his ability to express his thoughts in that language. The first thing to be dropped from the Greek curriculum ought not to be prose composition.

4. *Is it desirable to concentrate the study of preparatory Greek upon Attic prose to the exclusion of Homer?*

PROFESSOR C. W. SUPER, Ohio University, Athens, O.—The student begins with Greek grammar based on the Attic Greek. He studies the "Anabasis." Then he studies Greek grammar over again in Homer. This violates the principle of concentration. He ought first to read the Greek testament, as the style is simple and the subject-matter familiar. Then he should read Xenophon's "Anabasis of Cyrus;" next he should read Arrian's "Anabasis of Alexander." The ideal Greek author is Herodotus. The college might well spend the freshman year on the Homeric poetry. It is unfortunate that the Greeks seem to have made little provision for the education of children, inasmuch as much of the writing in Attic Greek is difficult beyond the comprehension of children, *e. g.*, Thucydides.

PROFESSOR G. M. SMITH, South Dakota University, advocated the study of Lysias as giving an insight into Greek life and thought, and agreed that studying Homer was illogical because of the necessity of carrying along two vocabularies and two grammars.

ROUND TABLE IN HISTORY.

PRINCIPAL C. W. FRENCH, HYDE PARK HIGH SCHOOL, CHICAGO, LEADER.

1. *Source-study method of teaching history in high schools.*

PAPER BY PROFESSOR H. W. CALDWELL, UNIVERSITY OF NEBRASKA.

Perhaps what I shall say this afternoon will be rather along the line of the use of sources in the teaching of history than in full harmony with the subject assigned me for my paper.

On every hand now in the West, and I doubt not the same is true of the East, one hears the "laboratory method" of teaching history discussed. This marks, I believe, the beginning of a new era in our subject. It means, if I am not mistaken, that history is just ready to take on more

completely the scientific aspect, and to be recognized as a training as well as a culture subject.

The teaching of botany, chemistry, and physics, as well as of geology and zoölogy, has been modified to a great extent within the last quarter of a century. The text-book has been replaced by the laboratory. The study about things has been transformed into a study of things. The text-book is now only an aid to interpretation; it is to guide, to correct, and to help bridge over the gaps; it is no longer to be committed to memory. To a certain extent the same transformation has taken place in history. The historian's laboratory is his library. Books have taken the place of one book, and of the lecture. Another change is now in process of making. The material of the historian's laboratory is undergoing a reconstruction. Collections of sources are being made. The old library, consisting very largely of secondary histories, is not enough. In fact, if it contains only such histories, it is nearly useless for the purposes of the new idea. We wish now to get as near as possible to the thing itself, to the actual living, breathing spirit of history, and to do this we must get as close to the time and to the event as possible. For example, if we wish to understand the nullification controversy, we must have access to Jackson's "Proclamation," to some, at least, of Calhoun's letters, to the proceedings of the South Carolina convention, to Webster's speeches, and, finally, to some of the newspapers of the time. Mr. Schouler may help us to understand these various documents, but he cannot, for us, put the breath of life into them. This each person, to a great extent, must do for himself. It is to be noted, in passing, that we may see three steps in this development in historical teaching. In the first stage a text was swallowed whole, and, in general, no digestion took place. The poor child rarely wished a second dose; history was dry and hateful to him. The second step was the library, or comparative, method, in which various authors were compared with each other. This was a great improvement. Interest, at least, was secured, and under a skillful teacher considerable training, especially when the facts were given in sufficient detail, so that judgment in weighing evidence might be called into play. I believe that I am now speaking for the next stage in this evolution. In the source we are going to the thing itself, or, at least, as near to it as it is possible to get. We are using the *secondary* writing largely for a different purpose than formerly; *viz.*, only to aid us in our work. This last step does not do away with the good points of each of the preceding. Whatever of value in the text-book and the lecture, whatever of good in the library, is to be retained. But we now seek at first hand what before had come to the student filtered and diluted till there was little strength left in it, and as a result most of our historical students died young, died of inanition. We believe we may now begin to say to the student:

"Come to us; we have mental, ethical, and moral food, which will strengthen your fibers and prepare you for the conflicts of life equally well with the other studies in the curriculum." Equally well! Yes, in some respects in a better way, for each branch of study has a work in education to perform, which no other can perform. No full-rounded education, it is believed, can now be had which does not embrace some work in history.

But it is my task to give very briefly some suggestions in regard to how source study may be introduced into the high school. In the first place, we must keep clearly in mind the meaning of a "source." It is a record, in some form, made, in general, by contemporaries of the event described. The form may vary. The value of sources will be unequal. The office of historical criticism will be to determine the worth of the various sources which shall come before us for use. It will be the duty of the skilled historian to furnish annotated compilations of sources to which the student may go. The high-school pupil cannot be presumed to be able ordinarily to determine the authenticity, for example, of a document; therefore, that part of the work must, as a rule, be done for him. In other words, it is not historical criticism which we wish our pupils to perform; it is, rather, historical interpretation.

But, again, as a preliminary conception we must note that there are two very distinct sides to history. There are the inner spirit and the outer form. The first is the thought, the idea, the feeling, or the emotion which prompts to action. This spirit is cause. It is the living part of history. From it flows action. Events and results are its products. This thought—public opinion, if you will—is continuous, but always in process of change. It lives in various manifestations. On the other hand, events occur, and that is the end; they never repeat themselves. This outer, formal side of history exists in records, the sources from which we are to reconstruct the past. The student from these sources seeks to know how public opinion was formed, and to determine what effects it produced. Ordinarily it will be found that the idea itself is modified to a greater or less extent in the process of action. This is well illustrated by Douglas in connection with the Kansas-Nebraska bill. The idea of the early days of January was greatly developed in action, and by March it had taken on almost a new form. An idea existed. Those who held it attempted to put it into action. In doing so they met resistance, and either became more intense or they compromised. Some of those who first opposed were convinced. Thus the idea emerged from the field of strife changed. The idea produced an event; the event modified the idea. Thus a new shade of thought was outlined ready to become the basis for future action. We may in this way see the two laws at work which are fundamental to our discussion—the law of continuity and the law of differentiation. Both

of these laws will be implied in every piece of interpretation which our pupils are going to undertake. Finally, we shall need in the use of every source which comes before us to perform two processes with which we are already familiar in other fields of study. In the first place, we shall have to analyze our material to find out what we have; then, by synthesis, we shall have to construct our picture, that we may understand what it all means. Personally, I believe that work in the sources may be introduced into the grades with advantage. The sources used must be of a simpler or more elementary character than those for the high school, just as the latter must be chosen on a different basis from those we are to use in college and university. I am sure, also, that much of the formal part of the work, which I shall attempt to describe later, should be made familiar to the pupils in the grades, and hence any drill on it in the high school would be unnecessary. The desirability of doing source work to some extent I deem to be beyond the point of discussion. How much shall be done and how it shall be done are as yet open and debatable questions. The feasibility has also ceased to be open to discussion with us in Nebraska. One hundred or more of our best schools have used the sources to a greater or less extent during the last year—in every case, as far as I have been able to find out, with results more satisfactory than those obtained from methods in vogue before. Experience, then, has demonstrated the desirability and the feasibility of source study. Of course, the answer in both cases is based upon assumed premises of what constitutes desirable results. Of this I may speak later, but in general it should be said that knowledge, culture, and mental training have all been taken into consideration.

It has been said above that the object of historical study is to understand the past. We desire to know causes and their effects, purposes and their ends; in fine, to get into the spirit of the period under observation. The people who lived then have left the record of their life in public and private documents, and in various other forms. Now, the advocates of the source-study method urge that the only way in which anyone can get into their spirit is by coming into contact with these records. One who had never seen or handled a flower would have a very vague idea of its nature from a mere verbal description of it. In the same way, the living past can be made our own only by seeing and studying it at first hand—no mere description can be enough. After one flower has been studied and analyzed, the student can picture to himself quite vividly another from mere description; hence it is not expected that all our botanical knowledge will come to us at first hand. The same is true in our science; enough source study must be done that the method by which narratives have been constructed may be understood. Then accumulation may continue by making use of other men's work. But it must ever

be kept in mind that all such knowledge is more or less lacking in definiteness and in real comprehension.

Is knowledge our aim in history teaching? The study of the sources, being more vivid, will leave more decided impressions, and, in the long run, the memory will retain more. Is culture in its broadest sense what we seek? Then the sources should, at least, be used along with the secondary account, in order that the latter may be made definite and intense. But if it is primarily mental training that we seek, then the original material is almost an essential.

An event is before us for interpretation. The pupil is given, not some one else's conclusions to be memorized, but the record of the event itself. Memory alone is not able to solve the problem. The student must use his judgment; he must analyze in the most careful way every word and phrase; he must go over the matter from every point of view; he must get it into his mind; in fact, he must live again the life of the vanished past. Now, all this calls for thought. There is no chance for mere passive reception. The mind must be alert, active. Interest will be aroused, for, to a certain extent, the person is again living over the scene under examination. This intensive work may, in a way, be done by a use of secondary authors, in the study of relationships. However, it lacks the vital interest of the use of the sources, for then the pupil—in his synthetic work, at least—may feel that he is a real creator; he is not dependent on the judgment of others merely. Besides, the work in the one case is almost sure to sink into a mere study of words, and to have no vital connection with things. From what has been said above it seems scarcely necessary to repeat that the "sources" are not to constitute our sole equipment for work in the high school. The best of secondary authors should be accessible—the more the better. But the secondary authority is to supplement, to give the formal side of history, to fill in the connections, to give us a basis of comparison, that we may judge the correctness of our conclusions; while the source is to give the vital life to our work.

But, it may be asked, how much time shall be given to the source work? The answer must vary. There is no hard and fast rule. The preparation of the teacher, the time at her command, the sources accessible, and other conditions, will all come in as factors in each individual case. In what years shall the work be done? Most emphatically, I answer, in every year of the high school, from the ninth to the twelfth grade, since history study must be made a part of every year's work. The amount of source study should increase with each year, and the character should change as the pupils gain in power.

But perhaps the fundamental part of this paper should be on the next question, How shall the work be done? Here, I have to admit, I have no

patent plan. On the whole, I believe that in the grammar grades, and in the first year or two of the high school, the Sheldon plan of question and answer, as a means of collecting the subject-matter, which is to be woven into the pupil's narrative, is to be commended. Now, the equipment needed for this work is simple, yet essential. Each pupil should have loose sheets of paper, and a neat cover in which to arrange them. This notebook thus made should be divided into several sections for convenience of use—one division for class notes; another for notes from secondary writers; a third for the readings on the sources; and, finally, a division for the "analyses" and "narrative" papers. Such a plan should be insisted on, not only for its convenience, but also for its value as a training in form and system.

Our source material now lies before us. The question is noted and the answer worked out. The proof for the answer should then be stated, and the page cited where it can be found. This is an essential part, since it teaches the pupil that no assertion can be made unless the proof is forthcoming. When this plan is persistently followed, even for a few months, it will be found that the whole school is transformed; proof will be demanded for everything, and the bane of so much of our work—unquestioning acceptance of text-book statements—will be gone. The foundation for a higher citizenship will also be laid. But after we have in this way critically gathered the material for our little history papers, the next step must also be faithfully taken. This material must now be analyzed, classified, and arranged in such a manner that it will be logical and present the matter in such a way that the nearest approach to a reproduction of the event under discussion shall be secured. This "outline" should be so constructed as to give ready reference to every point that is found in our notes which we wish to weave into our narrative. It goes without saying that each pupil should be given some scope for originality in preparing these outlines; yet a class criticism is always desirable. Finally, from the "material" gathered, following our "outline," we are to write our little history. Footnotes for important statements should be demanded, just as if the work was as important as a monograph or a thesis for a doctor's degree. Of course, this plan may be varied from in details, and, in fact, not followed at all, and yet good teaching be done. However, I can say that I know of no expedient which secures such accuracy, careful training in form, close thinking, and splendid preparation for higher work, as the plan above outlined. We must always be on our guard, however, lest it sink into mere formalism, the chief danger to which it is exposed.

As we advance to the higher classes in the high school, the plan of question and answer as a means for gathering the subject-matter should be used less. The pupils of the higher grades, as the twelfth, may be given

a document, or set of documents, and asked to find out what it contains. The mental processes used, however, are always the same. There can be no change. The gathering the material, the arranging it in logical order, and then the composition of the paper must be followed, whether the person be the humblest schoolboy or whether he be a von Holst or a Macaulay.

But I see I have about reached the limit of my time, and only a touch has been given to the subject here and there. I have attempted to make the paper suggestive rather than complete. If some one has gained a new idea or a little inspiration to push the work further, this paper has accomplished its mission, for I feel that I am only an anxious searcher for truth in method as in matter, and do not claim to be ready, as yet at least, to lay down any dogmatic principles, from which to vary is an educational sin.

But I cannot close without attempting to summarize the advantages which those of us who have been working along this line believe exist. Negatively mere memory work is almost wholly avoided, and passive receptivity on part of pupil is impossible; while the teacher, also, is forced to be alive and to work. Upon the positive side many advantages are gained. Accuracy and definiteness are secured. Nearly all who have tried the method claim that the tone of the whole school is raised in this respect. There is a marked improvement in form. Methodical work can be secured as in few other subjects of study. Possibly too much attention may be given to this side of the work, yet I believe that few teachers will deny that our pupils are generally very careless in form; hence a training in this respect will improve their chances of future success in life. Without exception teachers report greater interest, especially on the part of many who before seemed to have no ability at all for historical work. Of course, one of the main claims made is that the judgment is cultivated. This is peculiarly true for all topics which, like history, deal with probabilities, not certainties. But above all and everything else it is found that the spirit of research is aroused. The desire to find the truth is awakened. Investigators are created, and the fact is established that the only way to find the truth is by going to the head of the stream—to the source itself. Thus a greater degree of broadmindedness, a keener moral sentiment, a nobler ethical standard, as well as a better intellectual training, are secured. If these claims be not chimerical, may we not hope that a new enthusiasm will seize us as history teachers, and carry us forward till we have come nearer the goal we all seek—perfection?

PROFESSOR A. MORSE STEPHENS, Cornell University, spoke of the advantage to be gained by knowing what method was pursued by teachers of secondary schools. The Committee on History would be glad to obtain such information. He asked if the

"source method" was possible in the secondary schools, and said he would think it impossible on account of lack of libraries and trained teachers of history.

PROFESSOR L. E. WOLFE, High School, Kansas City, Mo.—The purpose of teaching history is to prepare for civilization. I should say that the only wise way to teach it is by the laboratory method.

2. College-entrance requirements, with special reference to the problem of the ordinary public high school of the central West.

PAPER BY DR. E. B. GREENE, UNIVERSITY OF ILLINOIS.

I wish to preface what I have to say by assuming that studies required for admission to college should generally be such, in amount and character, as to provide the best training available, under existing local conditions, for the average secondary-school pupil, whether preparing for college or not. College-entrance requirements ought, instead of discouraging, as they have too often done, to encourage every effort to secure a balanced high-school course. I should, at least, wish to apply this test to college-entrance requirements in history.

I should like, then, to consider, in the barest outline, what changes are desirable in the position of history in the programme of the ordinary public high school of the central West.

It seems clear that certain conditions prevailing here call for greater emphasis upon a right teaching of history. Especially significant is the comparatively limited scope and almost unavoidably inferior quality of classical instruction (I am not, of course, speaking here of the best city schools). This is accompanied by depreciation of what we may call the humanistic side of the high-school course. In all but a mere handful of the high schools of Illinois no Greek is taught. In a majority of those schools the teaching of Latin is so mechanical as to exert almost nothing of that humanizing influence which is the strongest argument for classical studies. Nor are these conditions merely temporary. The teaching of Latin will be improved, but probably Greek will never find general acceptance in the high-school programme. Yet the end sought in the old discipline of the *literæ humaniores*, the ideal of a liberal culture, is one which, in these days of the practical and the materially useful, we must be careful not to neglect. We may condemn the narrowness of the old discipline, we must respect its lofty idealism. We must emphasize, not less, but more, those studies which illustrate the ideal, universal aspects of humanity, "the things that are unseen and eternal." We have not forgotten the old ideal, though we work toward it through different means.

Two subjects, which are taught and can be well taught in almost every public high school, which have to a marked degree this humanizing value

—which, therefore, demand the most careful attention—are English literature and history. I wish here particularly to emphasize the importance of Greek and Roman history, taught, not as an exercise in learning by rote, nor yet mainly as an exercise in scientific historical method, but with the humanistic motive in the first place. The pupil who reads Plutarch, even in translation, may well catch such a glimpse of the Hellenic spirit as was not always attained by the boy who plodded through the “Anabasis” or the “Iliad” as through some willfully bewildering puzzle.

Some substantial results of this sort are certainly attainable, if a year of four or five exercises a week can be given to ancient history. They are certainly unattainable in the single term allotted in the common general-history course to the immense field from the building of the pyramids to the days of Augustus and Constantine, somewhat as Cook’s tourist covers Europe in a summer vacation.

For mediæval and modern times the general-history plan seems to me distinctly unfortunate. A very serious criticism, which is not new, but, in my judgment, has never been successfully met, is that this supposed superior comprehensiveness, which I believe to be generally delusive, involves necessarily a broken, and hence unsatisfactory, treatment of the development of any particular people, failing thus to bring forth that best fruit of scientific historical study, the sense of historical continuity. Limits of time prevent any illustration of this fact, which must be obvious to any careful teacher.

Another result of insistence upon general history has been comparative neglect of English and American history. Some wise men, indeed, consider it a great triumph if they can relegate American history from the high school to the grades. If the year of Greek and Roman history could be followed by a second year of English and American history, it would be possible to give the average high-school pupil some useful conception of the development, first on British and then on American soil, of institutions still familiar to the pupil, in modified forms, in the life of his own people. Here, somewhat more than in the ancient history, we ought to emphasize the scientific aspect of the study, to give elementary training in historical methods, and to awaken the sense of historical continuity. The practical value of these studies, as a preparation for citizenship, is sufficiently obvious.

One practical advantage of the simpler subjects over the more difficult general history is the comparatively abundant, easily accessible, easily intelligible material available for teacher and pupil. The conscientious teacher of continental history needs to work a considerable literature, often in foreign languages, not generally accessible; but in the study of Greek history Grote, Curtius, and Plutarch are ready to hand in almost

any good town library. In English and American history the advantage is still clearer. Certainly this is a consideration not to be ignored, if the teacher is to be a real student, not a mere hearer of lessons.

I should like, if there were time, to examine the claim that the general-history plan gives a really sounder knowledge of what are called the great general movements of European history than can be gained in a careful course in English history, broadly taught. To give but one simple illustration: Some people seem to think that, without a course in general history, the high-school pupil would go out into the world without ever having heard of Napoleon. Yet, what sort of teaching of English history would that be which should fail to impress upon the boy's mind something of that Titanic struggle between the land power and the sea power?

My study of the situation in Illinois leads me to believe that more than two years in history is not possible in the average high school. A two-years' course seems at least possible. A year of Greek and Roman history, followed by a year of English and American history, will, I believe, yield better results than the present general-history plan or some extension of it. The humanistic value of acquaintance with the remoter past of Greece and Rome will be combined with the practical value for citizenship of studying movements and institutions closely related to our present national life.

3. *An ideal course in history for secondary schools.*

PAPER BY PRINCIPAL E. V. ROBINSON, MUSKEGON, MICH.

It is happily no longer necessary to adduce arguments to prove that history is the peer of any subject, both in informational and educational value. This is now generally conceded. And substantial agreement has also been reached regarding the best methods of instruction. But opinions still differ not a little as to what constitutes an ideal course of historical study.

It may be well, before entering upon a discussion of the unsettled problems connected with this question, to enumerate briefly the points which may now be regarded as settled. These are, it is believed, somewhat as follows:

1. That historical study should be continuous during the last four, and preferably six, years of the elementary school.
2. That, in an ideal curriculum, at least three exercises per week should be devoted to history throughout the secondary school.
3. That the history of Greece and Rome should be taught, because of their contributions to the modern world, and the striking simplicity and power of their leading personalities and forces.
4. That the history of England should be included, because of its inti-

mate connection with American history, and because the world is indebted to England for constitutional government and the modern system of industry.

5. That, for many and obvious reasons, a thorough study of American history and civics should be made in the last year of the course.

The chief matter still under discussion is the advisability of teaching general history. The Madison conference cast its commanding influence for the substitution of French or German history, and this proposal has been approved by the New England and New York conferences. Yet expressions of radical dissent are heard, both from the rank and file of high-school teachers and from recognized leaders of educational opinion. Thus Professor Salmon, in a recent article entitled "Unity in College-Entrance History," makes a strong plea for the retention of general history. Professor Hudson, representing the University of Michigan, has urged that general history be given in preference, if need be, to English history. And even President Adams, who was chairman of the Madison conference, declares in the introduction to his "Manual of Historical Literature," in most felicitous and emphatic words, that a general outline of the subject should be secured before proceeding to the detailed study of special nations or epochs.

The reason usually assigned for this proposed substitution is the difficulty of teaching general history successfully. It is apt to fall into the Scylla of mere routine memorizing, or, if this be avoided, into the Charybdis of vague and meaningless generalities. This is a real difficulty, but experience shows that it is not insuperable. It is no uncommon thing to hear teachers maintain that their pupils grow in intellectual stature through the study of general history more than through any other one subject; and this is frequently corroborated by the pupils themselves.

A more important reason for the opposition to general history is suggested by the following passage in the report of the Madison conference: "Fortunately the subject of history, like that of natural science, is one in which the educational advantages may be obtained without covering the whole field." This indicates that the discarding of general history is a part and a result of the attempt to transfer attention and emphasis from the informational to the disciplinary side of the subject; the assumption being that the very incompleteness of the knowledge thus attained will tend to concentrate attention on the educational effect of the exercise. But, however desirable this object may be, it is at least open to question whether the means adopted will not injure rather than promote the cause of historical study.

In the first place, can we afford to have people and pupils feel that the knowledge acquired in the study of history is a matter of no moment?

Is not the attitude of the public towards purely formal studies, which are ridiculed as mere "intellectual gymnastics," a sufficient warning of the dangers inherent in this procedure? Moreover, waiving this question of expediency, is it true that the informational value of history can be safely neglected? Are we justified in sending pupils out into life with an imperfect and distorted conception of what has actually happened in the world, and, consequently, of the forces which are operative in the present and destined to control the future?

In order to break the force of this objection, it is suggested that French or German history be "so taught as to elucidate the general movement of mediæval and modern history." If this could really be done, there would be little room for controversy. But is it psychologically possible? Is it not rather in conflict with the precepts of sound pedagogy, no less than the teachings of experience?

Let us consider a moment just what is involved in this proposal.

Less than a generation ago history was either not taught at all in American colleges or was taught as a side issue by some overworked professor in another department. The marvelous change which we see today is due, above all, to one cause: the doctrine of the unity of history; that is, of a progressive development pervading the entire course of human events. In the words of Professor Sloane: "The doctrine of the unity of history has been so emphasized that the consequences are simply revolutionary. To accept the doctrine of unity is to admit that no country is more than one wheel in the series which moves the hands on the dial plate of human progress. We no longer study nations, but epochs. We have found the movement of the race more majestic than that of nations or individuals." And President Adams says: "The history of civilization is one continuous story of development. Before this fact all artificial distinctions between different periods of history and different kinds of history fade away."

Now, it is precisely this fundamental doctrine of unity which is ignored in the new programme. One wheel—to retain Professor Sloane's metaphor—is to be substituted for the whole series; the study of separate nations is to displace that of human development; and the artificial distinctions between different kinds of history are to be restored. Could anything be more reactionary? The old text-books in logic used to cite the case of a man who carried about a single brick as a sample of the house which he wished to sell; is not this a fallacy of exactly the same kind? In both cases the logical error consists in the substitution of a part for the whole, forgetful of the fact that the whole contains something different from and superior to any or all of the parts. Outside of mathematics it is seldom true that the sum of the parts is equal to the whole. For this reason a pupil might study in succession each of the great

nations, and yet at the end of his course, on account of the artificial separations and groupings thus occasioned, be unable to form any correct conception of the general movement of history. Something very like this actually happened in the case of a boy of unusual ability who had studied both French and English history, but was unable to grasp them in their relations to each other or to the rest of the world, until he studied general history; then he declared that it seemed as though the sun broke through the fog, and he saw in their true relations things which before had been confused and distorted.

It would seem, therefore, from this point of view, to be almost a truism that the only way of really "elucidating the general movement of history" is to study the general movement of history, not as a mere appendage to the history of France or Germany, but as being *per se* the chief subject of historical study. Any other treatment must fatally obscure the unity and perspective of history, by giving to one nation the prominence which belongs rightfully only to the common achievements of all nations.

In view of this fact, what is to be said of the claim that equal or greater disciplinary results may be obtained from a limited portion of history?

Before answering this question, a distinction must be made between technical and general discipline: the one being best attained by the intensive study of parts, the other by the extensive study of wholes. If the object of historical study be the mastery of the processes of historical interpretation and criticism, it is perfectly true that the history of some one nation would be preferable to general history. Not only so, but a single period would be better still, and a single document, studied intensively month after month, would be best of all. But such intensive study presupposes maturity of mind, which cannot be expected in secondary schools, and a wide knowledge of the subject as a whole—the very thing it is now proposed to get along without. Moreover, even were this not the case, such technical skill would be relatively useless for all pupils not destined to become scholars by profession. And the chief function of secondary schools is not the training of scholars, but the education of men and citizens. The discipline demanded of history as of all other subjects is, therefore, not technical, but general. It is that training of the mind and heart which will be most valuable in the most difficult and most neglected of all fine arts—the conduct of one's own life.

If this is true, it is difficult to escape the conclusion that the cutting-up of history into a number of longitudinal strips, of which the pupil could take only a small part, would diminish both the informational and the educational value of the subject. Can the interest of the pupils be

sustained when they see only snatches, here and there, of the great drama, while the rest goes on behind the scenes? Can they follow with equal certainty the relations of cause and effect, when the one or the other usually lies in regions beyond their gaze? Can their judgment receive a training of equal value, when the materials for comparison are largely denied them? Can the moral uplifting and purification, which constitute so large a part of the value of history, take place when the unity of action is destroyed, so that they are no longer able to recognize the justice of the Nemesis which overtakes nations as well as individuals? Finally, can the study produce the deepest and most abiding impressions on mind and character, when the pupil sees but dimly, at uncertain intervals, the sublime procession of the ages—the slow, but absolutely sure and irresistible, advance of human progress out of the measureless past, even to the present?

To all these questions it seems to me that but one answer can be made, and that an answer not favorable to the elimination of general history from the course.

In the arrangement of courses of study local conditions must be taken into consideration. But, in general, some such arrangement as the following would possess distinct advantages:

Ninth grade, ancient history, three periods per week.

Tenth grade, mediæval and modern history, three periods per week.

Eleventh grade, English history, three to five periods per week.

Twelfth grade, American history and civics, five periods per week.

No doubt, the objection will at once be raised that it is impossible to teach this amount of history and, at the same time, meet collegiate requirements in other branches. At present, this is unfortunately true. But the time is surely at hand when the many who never enter college will no longer be sacrificed to the few who do—or, rather, to the antiquated requirements which the colleges still maintain. If they cannot be brought to modify these, then so much the worse for the colleges. But there are encouraging signs of progress all along the line. Last fall Dr. Tetlow nearly secured important action in this direction on the part of the New England Association of Colleges and Preparatory Schools, and much is expected from the National Committee, of which Dr. Nightingale is chairman. The difficulty is, therefore, in a fair way to be removed. For the present it may be met, in all except the smallest schools, by offering college-preparatory pupils the required studies, and, at the same time, giving to others that training which will best fit them for life. This is not only the chief function of secondary schools, but their imperative duty.

ROUND TABLE IN ENGLISH.

MISS HARRIET L. KEELER, HIGH SCHOOL, CLEVELAND, O., LEADER.

1. *Are secondary schools getting the best results from present methods in English and composition?*

OUTLINE OF DISCUSSION BY GEORGE B. AITON, STATE INSPECTOR OF HIGH SCHOOLS, MINNESOTA.

SITUATION — Deficiencies in :

1. Eye and hand :
Penmanship and appearance on the page.
2. Features requiring thought and becoming largely automatic :
Spelling, capitalization, punctuation, paragraphing.
3. Thought work requiring :
(a) Culture — choice of words.
(b) Logical training — syntax.
4. Thought proper — literary content.
5. Expression — literary grace.

CAUSES —

1. Illiterate homes :
(a) Naturally and persistently illiterate, in spite of continued opportunity.
(b) Foreign unschooled element — honest, industrious, of hopeful potentiality, but not at present literate.
(c) Decadence through :
(a) Separation from literary influence.
(b) Abeyance of family reading, especially scriptural reading.
2. Influence of an undignified, careless press.
3. Spirit of the times.
4. Neglect due to :
(a) Crowding by information subjects.
(b) Wrong theory that English would incidentally take care of itself.
(c) Wrong estimate of literature as dilettant.
(d) Real want of knowing how to proceed.

REMEDY — Attention to :

- (a) Mechanics.
- (b) Material.
- (c) Dynamics.

2. *College-entrance English.*

PAPER BY DR. RICHARD JONES, UNIVERSITY OF THE STATE OF NEW YORK.

WHAT THE COLLEGES WANT.

At the thirty-third convocation of the University of the State of New York one of the members of the committee which selected the books

upon which the college-entrance examinations in English are now based said : "The one defect of English teaching in our schools is its unrelatedness, disjointedness, its vagueness of aim, its uncertainty of method." And, enlarging upon this theme, he observed that "what the colleges desire in the work of the secondary schools is unity of effort and harmony of method." Requesting the principals of the state to make, as the basis of their work in English, the books selected by the committee which he represented, he urged them to get their courses in English "into consonance with the college systems," to get into "harmony with the spirit of the English work being done now in institutions below you, above you, around you."

With the view of rendering some assistance to secondary schools in their present effort to get "into consonance with the college systems," the following letter was sent to professors of literature in various parts of the country :

UNIVERSITY OF THE STATE OF NEW YORK,

ALBANY, 16 November, 1896.

MY DEAR SIR : As a result of the co-operation of colleges and university men with the principals of academies and secondary schools, we have now college-entrance requirements in English substantially uniform throughout the United States, *i. e.*, the requirements are uniform as to the texts upon which these examinations are based. A pressing problem yet remains, however, *vis.*, how the texts thus chosen are to be studied, and what is to be the nature and the extent of the preparation upon these texts required for entrance to college. The subject of English as a college-entrance requirement being so new, many teachers are, as a matter of course, somewhat uncertain as yet in regard to methods of teaching it and the goal to be aimed at. Will you not, therefore, kindly send us a sample set of examination questions on the texts for the present school year (1896-97), such as will indicate to teachers of English in secondary schools the kind of preparation you require for admission into your freshman class? And if, as is probable, these questions are a compromise between your ideal and your recognition of the present limitations of candidates, will you not send in addition a set of questions such as you hope to ask as soon as preparatory schools are more able to meet your ideal? Selections from the sets of questions received, with comments and generalizations based upon these questions, will be published by the University of the State of New York. The publication will, presumably, be of interest to college and university men as a means for comparing requirements and ideals, and will, it is believed, prove genuinely and substantially helpful to teachers of literature, especially in college preparatory and secondary schools.

I shall be glad if you will add any suggestions, either on the subject of preparation for college-entrance examinations in English, or on the general subject of aims and methods in the study of literature. Hoping for your co-operation and advice, I am,

Sincerely yours,

RICHARD JONES.

A DIVERSITY OF OPINION AMONG COLLEGE MEN.

The replies indicate a wide diversity of opinion among college and university men as to the nature and extent of the preparation on these uniform texts which may be required of candidates for college. Indeed,

it would appear impossible at present for any secondary school to get "into consonance" simultaneously with the college systems of the country. For, though the aims of individual colleges in their entrance requirements may be perfectly definite, the aims of the colleges, collectively considered, are not; and on the supposition that the adoption of uniform texts implied some uniformity in the treatment of these texts, the teachers of English in secondary schools, who must attempt the difficult task of preparing classmates for these various kinds of entrance examinations, are justified in some sense of disappointment that the winter of their discontent is not yet made glorious summer on account of the "vagueness of aim" and "uncertainty of method" which prevail in the college-entrance examinations in English, notwithstanding the adoption of uniform texts.

As, for example, to select a few of the more extreme cases of diversity,¹ some of these pupils will be required at Harvard chiefly to demonstrate their ability to "write English;" or at Cornell, in conformity with Professor Hart's view that compositions based upon literary models should be the sole test of the candidate's capacity in English, to give the action of "Comus" in about 150 words, arranged in two paragraphs of seventy-five words each. Others will, at the University of Pennsylvania, give "the lesson" of "Comus," and will tell in what act and scene the chief characters of the "Merchant of Venice" appear together, and why they do not appear together in any other scene. At Trinity still others will indicate "the correct and incorrect" pronunciation of a list of words, and name two or three words sometimes wrongly pronounced which they have learned to pronounce correctly. At Rochester candidates will define and give the etymology of many words, and will "show definitely why the following statement is true: . . . 'as civilization advances, poetry almost necessarily declines.'" They will also tell how old Macaulay was when he wrote his "Essay on Milton." At the Teachers' College they will give "the dramatic purpose" of Antonio's intercession with Shylock after the time of the bond has expired, and will be required in general to show some elementary power in literary criticism. At the University of Indiana, also, they may be asked to explain "foreshadowing," "local color," and "dramatic suspense," and to discuss the need of the fifth act of the "Merchant of Venice." At The University of Chicago, and at several other institutions, they will be required to point out the

¹To guard against a possible misapprehension, it should, perhaps, be distinctly stated that the purpose of this discussion is not to advocate uniformity, but merely to direct attention to existing conditions. Many of the diverse, unconformable questions mentioned here and elsewhere are most suggestive and stimulating. It is apparent, however, that they are not compatible with the "unity of effort and harmony of method" which is urged by the colleges.

grammatical errors in incorrect sentences. At the University of Pennsylvania they will parse. Candidates have been asked at Cornell to name the members of the Spectator Club, and to describe three of them, but, in view of Professor Hart's proposition to regents' schools that "compositions upon subjects taken from the books read as literary models" shall be "the sole test of the scholar's capacity in English," one must conclude that it was the description of these three members of the club, and not the bit of literary history, which the examiners had prominently in mind. At Wesleyan University, in addition to minute questions on the prescribed texts, candidates may be asked whether they think Rosalind overbold and unwomanly in her talk with Orlando, and whether Portia gives Bassanio any clue to the right casket when he makes his choice—a question set by Johns Hopkins also. A discussion of these topics would certainly enliven the English recitations in a secondary school. Yet, if two or three members of the class are preparing to enter the University of the South, the wise teacher will "scant" any "excess" of this kind of joy, and will turn to a careful study of every difficult word or unusual grammatical construction in the prescribed texts, for in the examination the candidates will be called on to "comment on 'to come,' 'L'allegro,' l. 45." They will also comment on "Angel," "Lycidas," l. 163, and on the grammatical peculiarity of "Comus," l. 48.

LITERATURE OR COMPOSITION?

The chief considerations suggested by the entrance-examination questions of the colleges are: (1) Which shall the secondary schools emphasize, literature or composition? (2) How shall the literature that is taught as literature be taught?

Harvard, Cornell, and Dartmouth expressly state that ability to write correct English is considered of more importance than a knowledge of the prescribed texts. Cornell and Dartmouth treat both lists exactly alike, *i. e.*, as containing subjects for themes, no direct questions being set on either list. Harvard, however, sets questions on the books for "study," the answers to which may, indeed, be judged, to some extent at least, as essays. The answers to Wellesley's question were doubtless graded as essays. Several other colleges, *i. e.*, Yale, Columbia, Brown, Johns Hopkins, and Chicago, set no questions on the books prescribed for "reading," but suggest topics for themes based on these books.

Some of these colleges, however, perhaps all, do not treat these themes as themes merely, but insist upon some indication of passable knowledge on the part of the essayist of the subject-matter of the prescribed texts. Possibly the greater attention now given to English in the secondary schools has enabled Professor Briggs also to modify the position which he held in 1887, *viz.*, that if the boy can "write English," "he may pass the

examination, though, with Julius Cæsar for his subject, he declares that Marc Antony loved Cæsar less and Rome more." The composition element in some college-entrance requirements may be described in the words of Iago concerning his purse, "'tis something, nothing." On the other hand, candidates for the freshman class of either Harvard or Cornell find English composition to be, indeed, like good name in man and woman, "the immediate jewel of their souls." Professor Briggs, of Harvard, writes: "In general we lay more stress in our examination on English composition than on minute knowledge of the prescribed books. Our first question is, 'Does the candidate write English?'"

HOW SHALL LITERATURE BE TAUGHT ?

Unanimity of opinion on the question as to the chief end in view in secondary-school instruction in English, *viz.*, whether it be composition or literature, *i. e.*, ability on the part of the student to write English or to understand and appreciate the great English already written, being manifestly not to be hoped for at present, there remains to consider the second question: What method or methods for teaching literature are suggested by the entrance examinations of the colleges?

There is obvious uniformity of method on the part of a number of the colleges in their treatment of the books prescribed for "reading," but what is the approved method of study on the books prescribed for "study"? Shall these be conned "word by word" and "line by line," or shall an appreciation of the "significance and spirit of the whole" be the goal of endeavor? Shall the secondary-school pupil be required to define, to parse, to give the etymology and the grammatical construction of the more difficult words of the "Merchant of Venice," to comment on the italicized words in the passage, "Now, infidel, I have thee *on the hip*," to discuss the meter, and to scan the more difficult lines; or shall he be trained to state clearly the argument of Shylock and that of Portia in the trial scene, to tell whether our sympathy is aroused for or against Shylock and why, and to give what he considers to be the principal idea in the play?

FUNDAMENTALLY DIFFERENT METHODS OF STUDY SUGGESTED BY THE COLLEGES.

Some illustration of the variety in the questions set by the colleges has already been given. Nor is this variety confined to minor matters of unimportant detail. Methods of study fundamentally different are suggested to the secondary schools by the questions of Cornell and of Columbia, for example, or of Cornell and of Rochester. Cornell will ask the candidate to give (usually "in two paragraphs, about seventy-five words each") Webster's statement of the object of the monument or the substance

of the argument between Portia and Shylock, but will not ask him to define "sycophancy" or any other term, nor to explain the sense of "hard food for Midas," nor to tell what Macaulay means by "Augustan delicacy of taste." These questions, admirable as they are for testing the faithfulness of the candidate's study of the prescribed texts, are not compatible with Professor Hart's doctrine that compositions based upon the books read as literary models shall be the "sole test" of the candidate's capacity in English. An adequate impression of the difference between the methods of study suggested by Cornell and by Rochester is not easily given, unless the lists of questions are compared side by side.

Harvard and Yale also require different methods of preparation upon these uniform texts. Harvard suggests to teachers of English that these books "should not be studied word by word, or line by line, as if they were in a foreign tongue. Pupils should, of course, be made to understand what they read as they go along; but attention should be fixed, not on unimportant details of substance or of style, but on the significance and spirit of the whole. In studying a tragedy of Shakespeare, for example, far less time should be given to the discussion of details than to the march of events, the play of character, the main lines of the plot, the significance of the whole as a work of genius?" And, therefore, Harvard requires of the candidate for college entrance a clear statement of the argument of Shylock and that of Portia in the trial scene, and his opinion of the treatment Shylock receives throughout the play. Furthermore, the candidate's paper will be judged largely by its effectiveness as an essay and by the correctness of its English.

Yale, however, insists upon a more minute knowledge of the details of the prescribed texts. Professor Cook distinctly disavows a willingness to permit Marc Antony to love Cæsar less and Rome more, however faultless the English in which it be done. . . . Columbia's questions on the books for "study," like Yale's, imply a somewhat minute knowledge of the details of the text. To what extent, then, does Harvard's suggestion that these books should not be studied "word by word, or line by line, as if they were in a foreign tongue," express the opinion of college men? What study of words and of the exact meaning of difficult passages do the colleges in general recommend? The following—Columbia, Yale, Rochester, Union, Teachers' College, Brown, Wesleyan, Rutgers, Johns

¹ It is true, paradoxical as it may appear, that a reader may grasp the thought of a passage as a whole when he cannot define all the words one by one, or does not even understand them all; it is equally true that he may define and understand the words one by one and fail to grasp the whole thought. The mind may take either one of two views, both of which are harmful when carried too far: it may overlook small points in the general drift or substance of the passage, or it may be so intent on small points that it fails altogether to grasp the drift or substance. (Hinsdale, "Teaching the Language-Arts," p. 99.)

Hopkins, University of the South, Chicago, Nebraska, Stanford, Toronto (University College)—all require something at least of this “word-by-word” preparation on the college-entrance texts. They all call for the meaning of italicized words in given passages, as for example,

All in a robe of darkest *grain*.
And storied windows richly *dight*.

And *sable stole* of *cypress lawn*
Over thy *decent* shoulders drawn.

Various other linguistic requirements are approved by one or more of these colleges, such as a rule for the correct use of *shall* and *will*, or illustrations of the correct use of a list of words not found in the prescribed texts, or parsing, or the correction of examples of “bad English,” or answers to questions on formal grammar and rhetoric, or a personal confession as to whether the candidate ever uses the word “pants.”

In the entrance examinations under consideration the following colleges ask no questions whatever on the meaning or the use of individual words; they require no definitions, no etymologies, no syntax, no parsing, no correction of incorrect use, no interpretation of difficult passages: Harvard, Cornell, Wellesley, Williams, Tufts, Swarthmore, Indiana, and Knox. Pennsylvania, Dartmouth, and Trinity would also be included in this list, were it not that Pennsylvania requires parsing, and Dartmouth and Trinity the correction of examples of incorrect use.

The colleges in the first group which require somewhat of the “word-by-word” preparation may, as a matter of course, also set questions bearing upon “the significance and spirit of the whole”—as, indeed, some of them do. Several colleges in the list set but a single question implying this “word-by-word and line-by-line” method of preparation, the examination as a whole somewhat conforming to Harvard’s ideal. These may possibly have found the golden mean, or possibly may not yet have found a consistent method of expressing by means of examination questions their ideal of secondary-school study of English.

And yet, difficult as this method of expressing ideals may be, it is manifestly a matter of prime importance to secondary schools that in these entrance examinations college men shall, so far as possible, indicate an approved method of study. Comments on “yon grey lines that *fret* the clouds” imply a preparation widely different in method and in interest from that required to indicate “the dramatic center of the play,” to explain “the need of the fifth act,” to tell “what each of the following scenes contributes to the development of the play,” and to give “the principal idea of the play.” What is the approved method of preparation on these uniform texts?

A singular interest attaches to the entrance examination of the Uni-

versity of the South because of the irreconcilable methods of study suggested by this examination and by the address of Professor Trent at the Buffalo meeting of the National Educational Association, July, 1896. . . .

There is undoubted educational and disciplinary value in the closest study of certain masterpieces of literature, such as will cultivate in the pupil a habit of endeavoring to apprehend clearly the exact meaning of every passage—indeed, of every word; such as will, in short, give him the ability to understand language. And yet, if there be any measure whatever of truth in the proposition of Horace E. Scudder that “between the ages of six and sixteen a large part of the best literature of the world may be read, if taken up systematically in school,” there must manifestly be some limit to the time spent upon the grammatical peculiarities of “Comus.” But the teacher who, following the spirit of Harvard’s advice, has passed lightly over Hamlet’s line, “For, O, for, O, the hobby horse is forgot,” in order to dwell more at length on the comments of Goethe and Coleridge and Werder as to the significance of the whole as a work of transcendent genius, and who turns now to Milton’s great poem, purposing here also to pursue a similar study of the significance and spirit of the whole, is perplexed to find that the colleges require of his pupils but two of the twelve books of “Paradise Lost,” a poem whose purpose is to justify the ways of God to man, and which presumably then contains an argument, a movement of thought. The poem is thus more than a mere collection of discrete episodes, and yet apparently the Committee on College-Entrance Texts does not expect him to direct the attention of his pupils to the significance of the whole, to insist upon their keeping ever clearly in mind the movement of thought in the poem, and thus gaining in the end a clear conception of the “height of this great argument” and of the poet’s solution of the problem he has proposed. Has the modern world, then, so passed on to other modes of thought that the secondary-school pupil is not to be urged to climb to the height of this great argument, but is to be advised to read two books of the “Paradise Lost” mainly for the music of the incomparable blank verse? Or shall he be trained to write vivid themes on Satan and his crew? Or shall he parse man’s first disobedience, and comment on the *mortal* taste which brought death into the world and all our woe?

SUBJECT-MATTER, FORM, AND STRUCTURE.

Many of the questions set by the colleges were evidently intended merely as tests of the candidate’s knowledge of the subject-matter. Indeed, some college men distinctly disapprove of any attempt at formal literary criticism in the secondary schools. And yet questions on matters of fact lead imperceptibly on to considerations of form and structure, that is, to a more or less formal literary criticism. Rochester sets a

question respecting the introduction, body, and conclusion of Macaulay's "Essay on Milton," and asks whether the discussion respecting Charles the First mars the *unity* of the essay. This question is certainly justified by the suggestions of the committee in regard to the study of "form and structure." Brown asks how the stories are *joined* in the play of the "Merchant of Venice." Johns Hopkins also asks how Shakespeare has made the two stories one. Yale asks for "the dramatic center" of the play, the Teachers' College for the "dramatic purpose" of Antonio's intercession with Shylock after the time of the bond has expired. Wesleyan asks for the purpose of the first act and the last act, and why the passage

There's not the smallest orb which thou beholdst
But in his motion like an angel sings

was "put here rather than earlier." Pennsylvania, after the question, "In what act and scene do all the chief characters appear together?" asks why they do not appear together in any other scene. University College (Toronto) requires the candidate to give the main impression which the poet is attempting to produce upon the reader in the first twenty lines of a given passage from the "Lady of the Lake," and to point out the means which the poet employs to attain his end, and to state whether the succeeding five lines enforce or weaken this impression, and to tell how far the parts of the poem which treat of the flight of the deer, the funeral of Duncan, and the episode of Blanche contribute to the main story. Toronto also asks the purpose of the introduction of the songs in the "Lady of the Lake," and what each of certain scenes in the "Merchant of Venice" contributes to the development of the play. The University of Indiana requires definitions and illustrations of "foreshadowing," "local color," and "dramatic suspense," and asks how each canto develops the plot of "Marmion," and the need of the fifth act of the "Merchant of Venice." Dartmouth suggests an essay on "The literary methods of Defoe as shown in the 'History of the Plague.'"

Assuredly, the student is now fairly launched upon the uncertain sea of literary criticism, and yet, assuredly, no one would question the intellectual stimulus given by the foregoing questions, and the heightened interest in the study of literature resulting therefrom.

Still other questions, not all distinctly questions of literary criticism, suggest stimulating topics for class-room discussion, such as Union's question why so many people like "Evangeline," or how the "Tales of a Traveler" differ from the magazine stories of today. Expressions of the candidate's personal opinion are often called for. Columbia asks the candidate to criticise two passages and to say which passage he prefers and why. Wellesley asks for a "candid opinion, with full explanation and support," and for nothing else. Williams asks whether Shylock was

fairly treated and for the candidate's opinion of Shylock's daughter. Harvard, too, asks for the candidate's opinion of the treatment of Shylock, and Wesleyan asks whether Shakespeare makes us pity Shylock at last. The Teachers' College requests the candidate to point out the ways in which our sympathies are turned for or against Shylock, a form of statement which suggests a method of study conducive to intellectual discipline and yielding definite results.

Rochester's question as to the age of Macaulay when he wrote the "Essay on Milton" suggests to the secondary-school student the importance of a chronological study of an author's work. If the significance of this question be perceived by him, he will now begin to distinguish in all his reading between the early work of a youthful poet, pluming the wings for a lofty flight, whose *Weltanschauung* was then, perhaps, an emotion rather than a thought, and the later, matured view of life, the chastened judgment, of the silver-haired sage. No longer will Milton be to him indifferently Milton, whether the lines be a portion of a rhetorical exercise done within college walls or the majestic music of the ripened statesman-poet, who, having taken part in the struggle for liberty of thought and liberty of unlicensed printing, is now attempting themes "unattempted yet in prose or rhyme." A poet's later work, his Locksley halls sixty years after, may possibly be less poetic, notwithstanding the greater weight of thought; or possibly his poetic powers may develop continually to the end of life. Rochester's question, then, suggesting the importance of the chronology of an author's work, gives to the young reader a hint of a method of study which will enable him to follow and to understand the development of the author's spirit.

And yet, suggestive and stimulating as are many of these questions which deal with the "form and structure" of the college-entrance texts, touching thus upon the boundaries, at least, of formal literary criticism, there is, as yet, manifestly, no "system" of instruction in English, uniformly recommended by the colleges, with which the secondary schools may get "into consonance." The adoption of uniform college-entrance texts was a step toward the desired harmony of method. There still remains, however, to determine the nature and the extent of the preparation upon these uniform texts which shall receive the uniform approval of college men.

THE END IN VIEW DETERMINES THE CHOICE OF TEXTS.

It is certainly true, as Professor Jacobs, of Brown, has written, that "English teaching should be wider than any examination," and yet, since the method of secondary-school study approved by the college professor may to some extent be inferred from the character of the entrance-examination questions which he writes, and since there is so great variety in

the questions set by the colleges, notwithstanding their desire for harmony of method, there would seem to be practical wisdom in his suggestion that there is need of "a model course of instruction in English which shall set forth the aims of such instruction, and which shall be the joint product of college men and of secondary-school men." For while a complete and thorough-going dead level of uniformity in the method of teaching literature in the secondary schools is by no means to be desired, yet, if the movement to secure college-entrance texts in literature uniform throughout the United States be a wise movement, then there must follow a substantial agreement in regard to the end in view and the method of attaining this end, for the end in view determines, or should determine, the choice of texts. Even the masterpieces of literature are not all equally adapted for these various methods of study. One selection lends itself readily to the purposes of the teacher of composition, it supplies satisfactory material for themes; another selection suggests inspiring and noble thoughts, thoughts too deep for tears or too delicate and evanescent for unpoetic expression and for juvenile themes; while still another English classic, because it *has* exquisite form and structure, will be wisely included in the prescribed texts — if the study of artistic form and structure, "of the relation of the parts of a literary art-piece to the whole," be a proper study for secondary schools. What is the end in view? Not until this question is satisfactorily answered can there be a wise choice of texts for secondary-school study and an intelligent treatment of the texts thus chosen.

ROUND TABLE ON THE HIGH SCHOOL AS A SOCIAL FACTOR.

SAMUEL T. DUTTON, SUPERINTENDENT OF SCHOOLS, BROOKLINE, MASS.,
LEADER.

1. *The high school as a democratic institution.*

DR. C. H. THURBER, The University of Chicago.—The high school is not only a democratic institution, but it is *the* democratic institution of our educational system. We all know of its representative character; we know how the children of the higher classes of society mix with those of the lower, indifferent to rank. Children are born democrats. The public high school is nearer and dearer to the hearts of the people than all other institutions. Theoretically the high school recognizes diversity of aims, but practically it often does not. The high school is too likely to be a slave of its course of study, which is expected to prepare for the higher institution of learning. There is the tendency to drift away from commercial callings, a tendency which must be checked. The cause of this

condition of affairs does not lie in any desire to follow such a line of work. We have simply drifted into our present condition. The idea was once prevalent that only professional men needed the higher education. To counteract this wrong tendency we should introduce more practical studies, history of commerce and industries, politics, economy, civil government, and the study of the Spanish language, which is coming to take such an important part in commercial transactions.

2. The relation of the high school to the home.

PROFESSOR C. C. ROUNDS, New York.—In studying the relation of the school to the home, we study also its relation to the community. We must consider making a living in order to make a life. Such an adjustment of environment should be made as will enable the child to live and pay for his living.

Study of physical laws necessary—that which concerns the mind more necessary. Social and economic laws must be investigated, if we would understand our relations to our fellow-men. The law of right and wrong is needed as soon as the child knows the meaning of the word "ought." Home goes into and culminates in the school. The school is a society, representative of the world. If all parents were fitted to be parents, if all homes were good homes, all schools might more easily be good schools.

There is great need of ethical training in high schools. The pupil should learn that he can no more violate a moral than a physical law. He should be trained to a reverence for authority. A flag on a schoolhouse will not answer the purpose. A well-ordered school makes a well-ordered state.

There is no pleasanter subject or study than that of ethics, and it should have a regular place and time on the programme from the lowest grade up.

The school must supplement the family and must have the state in view. We grieve over the condition of affairs in Europe; we blush at the weakness of Christian monarchs. We can't reform Europe, but we can set our own house in order.

3. The high school in its relation to the community.

PRINCIPAL W. J. PRINGLE, Aurora, Ill.—Dr. Rounds has just said that there should be in our high-school curriculum a fixed time and place for the study of ethics. I question the wisdom of this. The study is interesting, but I do not think it will make a man better. In order that an emotion amount to anything either right or wrong, it must be followed by action. Ethical training is so intimately connected with ethical actions that we must teach ethics all the time.

But to the subject in hand, "the relation of the high school to the community." The conditions today are widely divergent from what they were fifty years ago. Then the average man lived on a farm, he was a local man, his needs were more circumscribed. The average man of today is cosmopolitan, he must know more of the world. Courses of study should be correspondingly broader for the citizen of this day. I believe in greater freedom and greater elasticity of school curricula, in order to bring into the school a larger proportion of the youth of the country. There must be more incentives to bring and keep the boys in school. In proportion to the number we may be able to enroll in our schools will be our influence upon the community. The very best I can advise is to have the school so constructed on the inside that the boys and girls will love it, be loyal to it, and gladly carry its influence with them into their homes, and thus affect the community.

4. *The high school as a training place for citizenship.*

PAPER BY PRINCIPAL J. REMSEN BISHOP, CINCINNATI, O.

There are three things which especially make for good citizenship: virtue, honesty, and self-support. Without virtue, by which I here mean clean living as regards the relations of the sexes, there can be no security. The man or woman—I refuse to believe that there is really any distinction between man and woman in this matter—who has cast away the sweet and fragrant flower of virtue may be likened to a bark upon the lake hard by that has lost its anchor. This ship might thereafter, on its voyage, through favoring winds and absence of storms, reach its haven in safety. But let a storm wind rise when she is near a lea shore, and nothing short of a miracle will save her.

Without honesty, in which should be included truthfulness and honorableness toward our fellow-man in all our dealings with him, the fabric of society would fall apart. Trickery in business, in politics, and in social relations, unless confined to those whose natural or acquired moral turpitude unfits them for honest dealing, would soon destroy confidence in the general probity of our Anglo-Saxon race. It is needless to point out that with the loss of this confidence, never shaken by a small number of exceptions to the general rule of honesty, would depart much of the happiness that still falls to the lot of the honorable man or woman. When such sentiments as, "Do your neighbor or you will be done by him," are uttered in a tone that is not all jest, we are nearing the danger line in this regard.

The ability to support herself or himself—for here again women no longer hide behind their sex—alone gives assurance that a man or woman will not be likely to join the apparently growing forces of discontent. This is not, under present conditions, a simple matter. The solving of the problem how to direct the development of the boy's or girl's powers, that he or she may find a niche in the structure of society, more nearly concerns our schools than even the question of reaching more successfully the moral nature.

In the everlasting conflict of "sense at war with soul" it is the chief duty of the teacher, as captain or lieutenant, to see to it that the young recruit is armed and trained. The young soldier must fight his own battle for his soul's victory. The teacher and the parent cannot do his fighting for him; but a certain kind of preparation gives almost perfect assurance of victory. I will briefly outline the general character which I think should mark the training. The young are imitative and enthusiastic. If moral men and women of this age and of former ages are held up to them as noble examples of good and successful lives, and if, in

addition to this, their enthusiasm is kindled to emulate their lives, much has been accomplished towards moral training. A habit of admiration for what is pure and good in human nature, implying a disgust for what is unclean and base, is gradually formed; the will of the young pupil assisting, under the stimulus of enthusiasm, in the completion of the process. As soon as the habit of admiring and imitating what is best, and of rejecting what is worse, becomes subconscious in this person's nature, will interferes with this subconscious, and, therefore, perfectly aiding, motive force toward virtuous and honest living. It seems to me that every high-school teacher, formally or incidentally, should aim to start, foster, and complete this process of moral training in the case of every one of his pupils. The unconscious influence the teacher ever exercises over his pupils will assist. The environments and relations of some of his pupils outside of school will defeat his effort, but where other influences are favorable, or even reasonably negative, he will succeed. In succeeding, he will have done what the Savior of mankind commissioned every man to do. He will have saved souls from vice and iniquity and consequent misery, for honor and purity and consequent happiness. All credit to the high-school teachers of the land, who, I believe without exception, are, as grace has been granted to each, training the young to win victory in that grim "war of time against the soul of man."

Just what the high school can do to direct the development of a boy's or girl's powers, that he or she may at once begin to earn a wage suited to age and condition, is now being carefully considered. In the use of the manual training high school and the business high school, or business course in the high school, we see the first practical effort to solve this problem. While I have no quarrel with manual training and business courses, and feel that the movement will reach a wide extent, I do not think these courses the best preparation for citizenship. If our high schools, with courses sufficiently elastic to allow for individual bent in the pupil, should graduate their pupils at sixteen years of age, I believe they would be doing all that could be done by this class of schools toward training for citizenship. Sixteen is not too advanced an age at which to begin at the bottom of any business or manual trade ladder, while the liberal instruction of the high school gives a certain power of æsthetic and intellectual comprehension that must add to a man's efficiency as a small factor and to his enjoyment of his own existence. I would strike at the traditional grading of schools. Destroy the foreboding and irrational gap between lower school and high school, and graduate at least nine-tenths from the public-school system at sixteen years of age. I am conscious that this is an unpopular view of the subject, and that teachers with reason are complaining that the pupils in the high schools are too young to grasp their subjects. The fault may be

with the subject or with the manner of presenting it, and not with the age of the pupil.

Noble work has certainly been done by our high schools; splendid men and women owe the incentives that made them so to the loving, wise, and patient training of the high-school teachers. If now, owing to the close competition of the age, when the machine does the work of many men, and it is hard to tell just what service society really requires of the young on the threshold of active life, if now the high school must set backward its beloved work a year or two years, the sacrifice will cheerfully be made. A true patriotism, such as actuates every public-school teacher, never hesitates when individual prejudice conflicts with the demands of our country's welfare. The high schools have trained those who in city, town, or hamlet bear the burden and heat of the day. Without the slightest doubt, modified or unmodified, they will continue for all time to render this inestimable service to our country and to mankind.

PROFESSOR A. S. DOWNING, Albany, N. Y.—I wish to emphasize this statement as a fundamental principle that education is formation. It is not a drawing-out nor a building-up, but a formative process.

When girls and boys enter the high school, they bear the print of the teacher's hand. Now the work of the high school is to train these pupils for citizenship by teaching them self-control. The pupil is to work freely, the teacher overseeing and correcting. Boys and girls should issue from the schools as self-controlling men and women. No one is virtuous without self-control, no one is honest without self-control, no one works constantly without self-control. It is the imperative duty of the high-school teacher so to discipline his pupils as to cultivate this quality. Pupils should be allowed to act freely, but when the teacher finds that the boy is going wrong, then the teacher must control him, until he has learned to control himself.

I have known of a whole community being changed by the wise training of the pupils of the high school. If we train our pupils to self-government, we are giving the best possible training for citizenship.

The second topic of the syllabus suggests that this citizen-training be carried on through the study of local history and local institutions.

If we can awaken an enthusiasm for their own environment—city, state, country—we shall do much. We should try to do this and to teach the pupils that it is a sacred duty to work for the institutions of their own locality.

5. *High-school extension.*

JAMES L. HUGHES, Inspector of Schools, Toronto, Canada.—The greatest problem of the century is the co-ordinating of forces around the child. This is the great purpose of education. Teachers are at the center of the movement; they should be the guiding, dominating influence. In cities and towns I think the high school the best co-ordinating center for the movement. There are two ways in which the high school may work: First, downward through the teachers and pupils of the higher grammar grades; through the teachers by helping them toward better methods, through the pupils by inspiring them with a desire for higher training. In Toronto we have the university assist in this work. The pupils of the higher grammar grades are frequently taken to the university to listen to a lecture by one of our special professors; thus they are stimulated by a desire

to gain a higher education for themselves by having an interest in the higher studies aroused. Secondly, the high school may work outward. By its night courses in literature, history, or science it influences directly the older members of the family. These high-school extension courses may follow any lines of thought, and for them the best available lecturers should be secured. This country is democratic, whether we be ruled by a queen, as on our side, or by a president, as on yours; we are all democratic, and we are socialistic. I use the term in its better sense. We ought, therefore, better to prepare ourselves for the work our country demands of us. It would, therefore, be well to teach civics, and kindred subjects, in these high-school extension courses. A wonderful study for today is the effect of foods and their value, as nutrition. Ventilation and sanitation will be gladly received. Child study under the head of mothers' meetings — though they should be parents' meetings — will be popular; and very many other subjects, which will suggest themselves, all of which will tend toward the co-ordination of society.

DEPARTMENT OF HIGHER EDUCATION.

SECRETARY'S MINUTES.

FIRST SESSION.—WEDNESDAY, JULY 7, 1897.

(JOINT SESSION WITH SECONDARY DEPARTMENT.)

SECOND SESSION.—THURSDAY, JULY 8.

The department met in Milwaukee - Downer College at 3 P. M., with President Swain of Indiana University in the chair. In the absence of the Secretary, Professor Robert J. Peters, of Missouri Valley College, was appointed secretary *pro tempore*.

The President announced the following Committee on Nominations of officers for 1898 :

President James H. Baker, University of Colorado, Chairman; Professor A. T. Ormond, Princeton University; Chancellor Snow, Kansas State University.

President James H. Canfield of Ohio State University delivered an address on "The Practical Value of College Training."

The discussion was opened by Chancellor G. E. MacLean, University of Nebraska, and continued by Professor A. T. Ormond, of Princeton University, and Chancellor Snow, Kansas State University.

President Henry Wade Rogers, Northwestern University, read a paper in support of the following resolution :

Resolved, That the state should exercise supervision over degree-conferring colleges through some properly constituted tribunal having power to fix a minimum standard of requirements for admission to or graduation from such institutions, and with the right to deprive of the degree-conferring power such institutions not conforming to the standard so prescribed.

The discussion was participated in by President R. H. Jesse, University of Missouri; President James H. Baker, University of Colorado; Chancellor Snow, University of Kansas; President King, Cornell College, Ia.; Professor Fellows, University of Chicago; Chancellor MacLean, University of Nebraska; Professor Ormond, Princeton University; Professor Buck, Iowa College; President Henry Wade Rogers, Northwestern University.

A motion was passed to amend the resolution by inserting the word "institutions" for "colleges," and the resolution, as amended, was adopted unanimously.

A motion was passed that the officers of the Department of Higher Education be requested to enter upon an investigation looking toward the possible formation of a national association of colleges and universities in the interest of proper standards for higher education, and to report at the next annual meeting.

By motion, the following resolution, introduced by Chancellor MacLean, University of Nebraska, was referred to the Executive Committee of the National Educational Association :

Resolved, That it is the sense of this department that in the English work of the secondary schools a large and open list of books for reading and study is preferable to a small required list, such as is recommended by the Joint Committee on the Uniform Entrance Requirements in English.

The Committee on Nominations submitted the following report for officers for 1898 :

For *President*, Dr. R. H. Jesse, President Missouri State University.

For *Vice-President*, Professor A. T. Ormond, Princeton University.

For *Secretary*, President Henry Wade Rogers, Northwestern University.

The report of the committee was adopted, and the nominees declared duly elected.

Adjourned.

ROBERT J. PETERS,
Acting Secretary.

[The editor regrets that from the valuable papers and discussions of this department only a single paper and a report of but one discussion were furnished by the department secretary for publication.]

PAPERS AND DISCUSSIONS.

STATE SUPERVISION OF DEGREE-CONFERRING INSTITUTIONS.

BY PRESIDENT HENRY WADE ROGERS, NORTHWESTERN UNIVERSITY,
EVANSTON, ILL.

Mr. Freeman, the English historian and Oxford professor, publishing his "Impressions of the United States," declared that one of the first things that impressed the stranger was the amazing number of universities and colleges existing here. After stating, "We can hardly be wrong in inferring that the degrees granted by some of these institutions cannot be worth very much," he goes on to say: "Now, my feelings make me most loath to say a word in any federal country against the powers of the several states, but it is surely not unreasonable to hint that the right of granting degrees should be assumed only by authority of the federal power. For a degree is surely a national thing, or, rather, it is something more than a national thing. It ought to be—I do not say whether it anywhere is—something like knighthood in old times, a badge of scholarship which should enable a man to take his place among scholars in any land to which he may come." Mr. Freeman seems to have been led to make these observations by the fact, to which he directs attention, that in the one state of Ohio there were thirty-two institutions with authority to grant degrees. It is easy to imagine that his feelings on this subject would have been not a little intensified, and his convictions very considerably strengthened, had he known that in the single state of Pennsylvania, which has not generally been regarded as sinning in these matters, one hundred and twenty institutions have authority to confer degrees. How many institutions there are in the country as a whole which have like authority I have not ascertained. The number is certainly large enough to afford good and sufficient reasons for reflections of a serious character.

In the first place, we must concede that there is no disposition on the part of the American people to transfer to the national government any part of the powers now vested in the state governments. In the second place, there appears to be no adequate reason for supposing that, if the federal government were possessed of the power advocated by Mr. Freeman, the educational standards of the country would be any higher than they are under existing conditions. It cannot even be said with any degree of certainty that there would be a uniform law, under which institutions of learning would be incorporated, unless the constitution should be so amended as expressly to require it. Whatever reform is to be accomplished will have to be wrought out by the individual action of the states.

The difficulty under which we labor in this country is not due to the fact that the states, rather than the United States, are in control of the subject of education. In Germany control over the universities is not in the empire, but, as in this country, is in the several states. The only difference is that in Germany the states exercise their rights of supervision, while in the United States, as a rule, they do not.

In this country it is usual to provide in the state constitutions that the legislatures shall pass no special act conferring corporate powers, but shall provide by general laws for the organization of corporations. The practice is, therefore, to enact a general law, which commonly provides that any three or five persons may be incorporated as a college or university on filing in the proper office a certificate stating the name, object, number of trustees, and place of location of the institution, and that it shall have power to grant such literary honors and degrees as are usually conferred by such institutions. In some states the degree power is granted without any restrictions, while in a few instances, as in Michigan and Minnesota, it is given, provided "the course of study to be pursued in such institution is in all respects as thorough and comprehensive as is usually pursued in similar institutions of the United States." This last provision is very well in theory, but in practice does not always afford that protection against abuses which it was intended to secure.

Under laws like these institutions are incorporated as colleges and universities that are without endowment, and, in not a few instances, are permitted to confer degrees, although the conditions prescribed for graduation are not higher than those prescribed for admission by institutions of high rank. Institutions whose total endowment is not equal to the necessities of an academy of the first rank presume to confer the doctorate of philosophy on non-resident students and have more candidates enrolled for that degree than they have college students in actual attendance. The degree of Doctor of Civil Law is being dishonored in a manner that deserves the utmost censure. A law school announcing

that it has for its object "the promotion of a higher standard of legal education" belies its pretensions by its prostitution of that high degree. These are the conditions which it prescribes:

1. The candidate, if he possess "a good common-school education," is admitted to the school, and at the end of two years obtains his degree of LL.B. (although law schools of the first class now require three years for that degree).

2. Having received the degree of LL.B., he spends one year longer in the school and obtains the degree of LL.M.

3. Having received the degree of LL.M., he continues for a fourth year and then obtains the degree of Doctor of Civil Law, although he has no knowledge of a single foreign language, is unfamiliar with English literature, with the natural sciences, or the higher mathematics. Taking into the account the amount of time spent in previous preparation, this degree can be obtained in less time than is required for the degree of Bachelor of Arts.

And yet, on the advisory board of this school may be found the names of a senator of the United States, several of the judges of the supreme court of the state, a bishop of the church, and the president of an academy of sciences. One cannot help wondering how men of their prominence can lend themselves to such an enterprise. They are not quite consenting to the sale of the degree, but they are certainly consenting, whether they are aware of it or not, to its woeful prostitution.

The cause of professional as well as of academic education suffers from the want of adequate state supervision. Professional schools have been established, generally in the large cities, which are governed by purely commercial standards. We have in this country schools of law, medicine, dentistry, and pharmacy that appear to be organized and conducted for the purpose of making money. They are stock corporations, the stock being generally held by members of the teaching force, the teachers being chosen, not for their fitness for any particular chair, but because of their willingness and ability to put up the money that is needed. The shorter the course of study, the cheaper the class of teachers; the less expended for books and apparatus, and the easier it is made to be admitted and graduated, the greater the number of students becomes and the larger the amount of the dividends paid. Men who make merchandise of professional education have low professional and scholastic ideals. They are inclined to receive all students who apply for admission, without much regard to their previous preparation or their moral character. They allow the students thus admitted to continue in their school without being concerned greatly as to the manner in which they apply themselves to study. They graduate them after an attendance for the allotted period, without scrutinizing too closely the

extent of their ignorance, and confer upon them a degree which in theory is supposed to stand for high attainments. This sort of thing, impossible in Europe, should be made impossible in America. Such a condition of affairs is demoralizing beyond question. The tendency of it is all in the direction of low standards. It destroys the value of degrees. It imposes on the public a class of educational charlatans, and works injury to the students whom it falsely pretends to educate. It multiplies the difficulties in the way of those institutions that are endeavoring to do their work according to the highest standards. A faculty of law, or medicine, or dentistry, or pharmacy that is conducting a school on any such basis as that described ought not to have authority to confer degrees. There should be no hesitancy in declaring that the interests of education, and, therefore, the interests of the public, require that, when the state does not exercise a power of supervision and does not establish a minimum standard of admission and graduation, it should withhold from every stock company the power of conferring degrees. I do not desire to be understood as intimating an opinion that no school can be worthy of public confidence which is conducted by a stock corporation paying dividends to its members, but only that the danger from schools of this class is so great that it is not wise, in the absence of state supervision, to intrust them with the degree-conferring power. While here and there a dividend-paying school may exist with high standards and be worthy of confidence, the influence of the great majority of schools conducted for the purposes of revenue is so bad, from an educational point of view, that the state would be justified in withholding from them all degree-conferring power.

The state of New York has recognized the evil which is connected with this class of institutions, and the ordinances of the university contain the following provision :

"No educational institution or association incorporated or conducted as a business enterprise, so that any part of its assets or income may be divided among stockholders or members, shall have university membership, or share in any grant of public money, or publish itself as holding its charter from, or having any connection with, the university, except in words for the use of which it has written permission from the regents. If subject to university supervision, it shall use the words 'Chartered as a stock (or business) corporation,' or some other descriptive word or phrase accepted by the regents as sufficiently indicating its proprietary character, wherever the fact of its incorporation is printed.

"This group shall include all corporations holding limited charters for the university, and also every association or institution under university supervision not so organized that all its assets and receipts from tuition or other sources must be used solely for the benefit of the public

and without profit to stockholders, officers, or teachers, beyond reasonable compensation for services actually rendered."

State supervision justifying state recognition of diplomas must be a supervision that extends impartially over all the degree-conferring institutions of the state, and which is exercised by prescribing standards and by seeing that those standards are honestly conformed to. Special privileges based on a supervision that extends to less than the whole no state should think of granting.

In some states the diploma of a professional school is accorded recognition by allowing the one to whom it has been granted to practice law, medicine, dentistry, or pharmacy, as the case may be, without requiring any examination as to professional knowledge. This is a mistake and in itself tends to lower educational standards. A school which knows that its graduates will have to take the examination by the state will be ambitious, if the examination by the state is at all what it ought to be, that those whom it has trained and graduated should not only pass the state's examination, but that they should rank as high as those who have been graduated from other schools. The state's examination furnishes a constant pressure upon these schools in the direction of thorough work and higher standards. But irrespective of the effect upon the schools, it certainly is quite indefensible that a state which exercises no supervision over the schools, which does not prescribe a minimum of requirements for admission and graduation, and which does not ascertain for itself upon inspection the thoroughness of the work done, should accord to the graduates exemption from the examinations required of persons proposing to practice law, medicine, dentistry, or pharmacy. The state, in the absence of its own supervision, is without any adequate guarantee that the work of the schools is so thoroughly done as to entitle any and every person holding a degree to be at once allowed to enter upon professional practice. This want of any sufficient guarantee is especially true when stock companies are allowed, without supervision, to confer, and I had almost said to sell, their degrees. But there is no good reason why diplomas may not be accepted in lieu of examinations in states which really exercise supervision over the degree-conferring institutions. It would, however, be most unjust and unworthy to accord to the diplomas issued by a state university any special privileges, simply because it is an institution under state control, and any attempt of that kind might very properly arouse resentment to the prejudice of the institution concerned. There might be, in the same state, institutions under private control doing as good, if not better, work. To attach to the diplomas of the state university, because of its state character, any special privileges would manifestly be unfair, and the thought of it is not to be entertained.

The *laissez-faire* policy which is responsible for the existing abuses which characterize our educational affairs is not in favor in the state of New York. That state has set an example which deserves to be followed by other American states. Its legislation on this subject has been wisely framed. The legislature of that state, at its first session after the close of the Revolutionary War, created the University of New York and placed the same in the control of a board of regents composed of men of the highest character and distinction. The University of New York is not a teaching body. It includes and has supervision over all the colleges and academies of the state, although each has its own board of trustees for the management of its individual affairs. The regents of the University of New York are elected by the legislature of the state, and no person can be at the same time a regent of the university and a trustee or officer of any one of the colleges or academies of the state. The laws of New York confer upon the regents authority to incorporate universities, colleges, academies, and other educational institutions, with such powers and subject to such limitations and restrictions "as the regents may prescribe in conformity to law." They are also given the right, for sufficient cause, to suspend or revoke the charter of any educational institution.

Under a law passed in 1892 it is provided that, "No institution shall be given power to confer degrees in this state, unless it shall have resources of at least \$500,000; and no institution for higher education shall be incorporated without suitable provision, approved by the regents, for buildings, furniture, educational equipment, and proper maintenance." Under the ordinances of the university it has, however, been provided that, "if the regents are satisfied that public interests will be promoted by such incorporation, that suitable provision has been made for buildings, furniture, educational equipment, and proper maintenance, and that the institution has resources of at least \$100,000, if it is a college, \$50,000, if an academy," then a charter may be issued to it. But institutions incorporated under this provision are not given degree-conferring powers.

The state of Pennsylvania has recently followed the example of her sister state. In 1895 the legislature of that commonwealth passed an act creating a college and university council, and conferred upon it full authority to decide upon the advisability of chartering new institutions. No institution can now be chartered in that state with power to confer degrees, unless its assets amount to \$500,000 for the exclusive purpose of promoting instruction, and unless the faculty consists of at least six regular professors, who devote all their time to the instruction of its college or university classes. The council has adopted uniform entrance requirements, which are obligatory as a minimum on all the collegiate institu-

tions of the state. And no baccalaureate degree in arts, science, philosophy, or literature can now be conferred by any institution in the state on any student who has not completed a college or university course covering four years.

In America we are too easy-going about many things, and we have much to learn from a study of European methods and the legislation of foreign states. American degrees are discredited in Europe because of the want of supervision of the degree-conferring power.

The constitutional provisions against special laws and making it necessary to incorporate under general statutes do not prevent the state from establishing all needed restrictions for the safeguarding of degrees.

There should be established in each state a council of education, which shall be intrusted with powers similar to those vested in the regents of the University of New York, and it should be composed of the most eminent men in the state, without any reference to political considerations. No degree-conferring institution should be incorporated without the approval of the council of education, which should be indorsed upon or filed with the certificate of incorporation. That council should have the right to fix the minimum standard of requirements for admission and graduation, and the conditions under which degrees may be conferred, and the degree-conferring power should be withheld from all institutions not complying with the regulations established. Such legislation should be made applicable to all institutions thereafter incorporated, as well as to those already incorporated, when the state has reserved the power to modify the powers conferred. It could not be made to apply to institutions already incorporated in cases where the state has not reserved power to do so.

There appears to be no good reason for doubting the constitutionality of the proposed legislation. No constitutional provision is violated by creating a council or commission, and giving it the power to decide the questions which otherwise would be left to each institution to decide for itself. The principle that legislative power cannot be delegated is not involved. On determining the questions submitted to it, the council is no more engaged in acts of legislation than would be the institutions themselves or the individual incorporators. "Cannot the legislature," asks the New York court of appeals, "confer upon a commission the power, upon the application of individuals, to make the same determination for the individuals which they could make for themselves?" The court answered the question in the affirmative, and so, I believe, would the courts of the country generally.

May we not hope that, in the several states, legislation may be obtained which shall protect the universities of the country from the evils which exist from the failure to exercise a supervision deemed essential by

European states? We Americans need to rid ourselves of the notion that a "go-as-you-please" policy is good enough for us. The time has come when institutions doing only preparatory work should not be permitted to confer university degrees, and when professional schools established as money-making manufactories should be deprived of the right to sell degrees.

DISCUSSION.

PRESIDENT JAMES H. BAKER, University of Colorado.—The state should exercise control over degree-conferring colleges, because (*a*) the country is developed beyond the period when crude expedients for higher education are necessary; (*b*) the majority of the states provide, at public expense, higher education of a good standard, making colleges of inferior grade unnecessary; (*c*) the state should guard the people against the deceptive claims of institutions not properly equipped to maintain work according to the accepted standards of the country; (*d*) for practical considerations, as well as reasons of sentiment, a degree should be such as to merit the respect of genuine scholars; (*e*) proper control would reduce the number of unnecessary colleges; (*f*) the kind of degrees should be subject to control, and the abuse of honorary degrees should be regulated; (*g*) in this matter the advantages of freedom and competition are more than offset by the disadvantages.

To this end (*a*) there should be a national association of colleges and universities, the conditions for membership in which should be a reasonable standard as to income, equipment, faculty, admission, graduation, and use of honorary degrees; (*b*) an effort should be made in each state to conform to the requirements of the national association.

NORMAL DEPARTMENT.

SECRETARY'S MINUTES.

FIRST SESSION.—WEDNESDAY, JULY 7, 1897.

The first session of this department met in the Normal School, Milwaukee, Wis., at 3 o'clock.

Albert G. Boyden, of Bridgewater, Mass., President of the department, occupied the chair. J. N. Wilkinson, of Emporia, Kan., was asked to report the discussions of the session.

President Z. X. Snyder, of Greeley, Colo., Chairman of the committee appointed at the Buffalo meeting to report upon the present condition of normal schools in our country, and upon means of improving and unifying normal work, read the report of the committee.

President Snyder, President Seerley, and President Pierce, of the committee, contributed to the explanation and defense of the report. The report was further discussed by President Cook, of Illinois, and others.

President Cook moved that the committee be continued and be requested to formulate minimum requirements necessary to constitute a true normal school.

President Taylor offered the following substitute for Dr. Cook's motion, which, after some discussion, was adopted, as follows :

Resolved, That the report be accepted, and the committee continued, with instructions to go on with the investigation on the lines proposed, and also to submit a course of study with minimum professional instruction for the state normal schools of the United States.

Dr. Boone moved that it be the sense of this department that the National Educational Association appropriate the sum of five hundred dollars (\$500) to meet the expenses of this investigation. Carried.

Upon motion of President Snyder, Presidents Boone, Cook, and Lyte were made a committee to wait upon the trustees of the association and endeavor to secure the above appropriation.

The President appointed the following Committee on Nominations :

Jno. W. Cook, E. A. Sheldon, Albert Salisbury.

SECOND SESSION.—FRIDAY, JULY 9.

President Richard G. Boone, State Normal College, Ypsilanti, Mich., read a paper upon the subject, "How Can the Normal School Most Effectively Accomplish Its Purpose?"

The paper was discussed by Albert Salisbury, State Normal School, Whitewater, Wis., and others.

The Committee on Nominations then made the following report :

For President, H. H. Seerley, Cedar Falls, Ia.

For Vice-President, Rose C. Swart, Oshkosh, Wis.

For Secretary, F. B. Palmer, Fredonia, N. Y.

By a unanimous vote the Secretary was instructed to cast the ballot of the department for these officers, and they were declared elected.

On motion of Z. X. Snyder, of Colorado, A. G. Boyden, Bridgewater, Mass., was placed upon the Normal Committee, *vice* Larkin Dunton, Boston, Mass., resigned; and the President was instructed to fill the vacancy occasioned by the resignation of Miss Marian Brown, New Orleans, La. The President appointed R. G. Boone, Ypsilanti, Mich.

Adjourned.

E. A. STRONG,
Secretary.

PAPERS AND DISCUSSIONS.

REPORT OF NORMAL-SCHOOL COMMITTEE.

The committee appointed one year ago at Buffalo to report on the report of the Buffalo meeting has the honor to submit the following:

THE BUFFALO REPORT.

It is thought best here to state the Buffalo report, that all may have a clear understanding of the report about to be given. It is as follows:

I. That there be inquiries (1) as to their control; (2) management; (3) maintenance; (4) variations that exist on account of geographical location; (5) course of study, comprehending academic and professional work; (6) model or practice school; (7) kindergarten work; (8) the effect upon public schools of the country; (9) recognition of diplomas in states other than the one in which issued; (10) the consideration of any other lines pertinent to normal schools.

II. Your committee recommends the appointment of a committee to make a printed report on the above to the Normal Department at its next annual session.

III. The nature of such printed report to determine if it be of sufficient importance to present the matter to the general association for a thorough investigation.

Respectfully submitted,

Z. X. SNYDER, *Chairman*, Greeley, Colo.;

N. C. SCHAEFFER, Harrisburg, Pa.;

H. H. SEERLEY, Cedar Falls, Ia.

The committee appointed is as follows: Z. X. Snyder, Greeley, Colo., Chairman; Nathan C. Schaeffer, Harrisburg, Pa.; Homer H. Seerley, Cedar Falls, Ia.; Edward T. Pierce, Los Angeles, Cal.; Mrs. Delia Lathrop Williams, Albany, N. Y.; Frank M. McMurry, Buffalo, N. Y.; Larkin Dunton, Boston, Mass.; Miss Marion Brown, New Orleans, La.

The work of the committee was distributed as follows: To N. C. Schaeffer, Inquiries 1 and 2; to Mrs. Delia Lathrop Williams, Inquiry 3; to Homer H. Seerley, Inquiry 4; to Larkin Dunton, Inquiry 5; to Frank M. McMurry, Inquiry 6; to Miss Marion Brown, Inquiry 7; to Z. X. Snyder, Inquiry 8; to Edward T. Pierce, Inquiry 9.

Reports have been made upon all these inquiries, with the exception of 3 and 5. No. 5 has, however, been partially investigated in Inquiry 8.

SUBCOMMITTEE REPORTS.

Following are the reports received from various members of the committee :

INQUIRIES 1 AND 2.—N. C. SCHAEFFER.

CONCERNING CONTROL AND MANAGEMENT OF SCHOOLS.

A brief summary of the report is :

1. That as a rule the external affairs of the schools are under the control and management of a board of trustees usually appointed by the governor and confirmed by the senate.

2. That there is a general unanimity among state superintendents and principals of the normals that the plan is good.

3. That, in addition to the external control of the affairs, the trustees select the teachers and delegate to the faculty or its head powers that must be exercised by those having internal control.

4. That usually the wishes of the principal are consulted in the selection of his colleagues. However, if this right is not accorded to him either tacitly or by statute, there is constant danger of friction and discord in the faculty.

5. That, to increase the efficiency of control and management, more money, less politics, limitation of the power of local trustees, the vesting of greater power in the head of the faculty, and the raising of the standard of admission, are necessary.

INQUIRY 4.—HOMER H. SEERLEY.

VARIATIONS THAT EXIST IN NORMAL SCHOOLS OF THE UNITED STATES
BECAUSE OF GEOGRAPHICAL LOCATION.

I sent the following letter to every state normal school in the United States, and have had answers from many of them. It was apparent that not much thought had been given to many of the replies. I append, however, an abstract of the letters which will give you the notions that you will need to gain in addition to this report.

President State Normal School:

DEAR SIR: The Normal Department of the National Educational Association has entered upon an investigation of state normal schools, with the purpose of coming to a more definite understanding of the province and work of this class of schools. I am asked to make a subcommittee report on the subject "Variations that Exist in Normal Schools on Account of Geographical Location." Will you please tell me:

1. To what extent your courses of study are statutory ?
2. In what ways the work of your school is modified by local or state conditions ?
3. What are the limitations of the school in its founding act ?
4. What favors are granted to your graduates by law ?

Please give me these facts and other information that will enable me to come to a fair knowledge of the conditions existing in state schools in the United States, at your earliest convenience, so that I may get the summary before the general committee in a short time.

Yours truly,
HOMER H. SEERLEY, *President.*

SUMMARY OF THE STUDY.

1. Almost all of the normal schools of the United States are founded for the sole purpose of preparing teachers for the state that establishes them. Most of these schools are conducted on the theory that normal-school education has no right to exist on the same general theory that state universities exist—the general welfare of the people of the United States, and the bettering of the entire teaching profession.

2. Such a theory in the foundation acts makes these schools more provincial than they should be, and, therefore, keeps them limited to the field of preparing elementary

teachers for the lowest grades of schools, and does not insure them the patronage of the best and most promising students, since these necessarily go to the colleges and universities for far more extended and complete courses, and there is left to the state normal schools a class of students that do not seek large provinces, and cannot invest much in their preparation for life.

3. There is, because of these things, large variation in the courses of study, as the field of thought in the organization of such schools is not the world, but the district or state, and hence everything is bent to make the courses such as these probable districts need or demand. If a school is located in a district or section where there are meager privileges through public schools, it becomes a low-grade school, like the public schools themselves.

4. It is apparent, also, that the most advanced normal schools that do not try to meet this need for rural teachers are not supplying the common schools with teachers. The assumption, therefore, is taken that a normal school must not get above educating the rural school-teacher, if it fills its province.

5. The colored normal schools in the South are nearly all industrial, and are an attempt to suit the provincial demand to supply the negro with skill in workmanship, as well as ability and scholarship to teach the ordinary school. The white normal schools are not of this class, but maintain a course of instruction that is adapted to a provincial condition.

6. The system of normal schools in the Middle Atlantic states show that they are schools with a variety of courses, to suit not only a teacher class, but also another class that is seeking secondary education alone. This places professional studies in a minimum and academic studies in a maximum relation. This is notably true in the great states of Pennsylvania and New York.

7. The New England normal schools have a special professional character that is not yet known elsewhere. They are peculiar in their organization and management, and are distinct from those found in any other part of the country.

8. The north central state normal schools form a part of the entire system of public education, and are gradually growing to be more and more of a factor in general education. They assume to provide for three classes of students: (a) the common school-teacher now authorized to teach; (b) the high-school graduate; (c) the college graduate. They are commonly recognized by the university as fitting schools, and students who graduate from them do not lose more time on a university course than they would if they sought to take a professional course in pedagogy in a year after getting their college degrees.

9. There is another class of normal schools which profess to do no academic work, and to be purely professional schools. This is particularly the case with the New York Normal College (Albany).

10. There is another class of normal schools that claim to be colleges in fact, such as the one at Troy, Ala.

11. There is also large variation in this class of schools in the recognition given to graduates. (a) In some the states make the course of study, pay all bills, examine the students, and in the end confer the right to teach anywhere in the state without examination. (b) In others there are no favors of any kind granted graduates of these schools, they being required to be examined by the common authority, the same as other persons not thus educated. (c) In still others the school diploma is authority to teach. (d) In still others the diploma is not conferred until success in teaching is proved by actual experience. (e) In some others cities and towns do not even accept state certificates and normal-school diplomas, even where the laws permit them to do so.

12. There is also large variation in the training in actual teaching through a practice

school. (a) Some schools value this work as the best thing in the course of study, and others consider it neither a guide nor a help. (b) Some give much, some little of such work. (c) Some allow this work to form the greater part of the course of study, and some give it hardly any consideration at all, and do not care for it.

13. There is also large variation in the amount and kind of professional work required. Some put history of education in the first year, at the time of pursuing the common branches. Others give history of education as a concluding didactic subject in the fourth year of the course. The same thing is true of psychology and school management.

14. In conclusion, I do not see how these variations could be either more marked or more definite if the plan was to put forth as many theories and experiments as the human mind could invent. There is no typical state normal school yet developed. It remains for the future to develop it. There is no typical course of study for teachers to pursue to get a certain preparation for the business. There are no single ideas that are common to all schools that are called by the name "normal." These schools are wonderfully provincial, and are not managed by the states to be any broader in conception or plan. There is scarcely any reciprocity between schools of this class, and very little faith in one another's work. There is a confusion that makes meetings of persons at work in different states, or at the National Educational Association, entirely unsatisfactory, since there is no disposition to get together and formulate any plan that will unify their professional efforts, but a constant disposition to show peculiarities and specialties, and oppose others in their notions just as peculiar and provincial. Until there is a change in this policy and purpose, the normal school will remain an indefinite and unsolved problem.

Respectfully submitted,

H. H. SEERLEY.

INQUIRY 6.—FRANK M. McMURRY.

THE RELATION OF THE PRACTICE SCHOOL TO THE NORMAL, ETC.

I have been considering for a good while what I should do in regard to the suggested inquiry touching practice schools. For the points needing investigation I would give very little for the expression of opinions that might be gotten together by circulating a suitable list of questions. The answers in such cases are given too hastily to be worth much.

Consequently I choose, as my report, to formulate a few serious questions in regard to practice schools, with the suggestion that a committee of picked men be appointed to increase this list, if necessary, and to draw up an argumentative reply to the same. This seems to me especially important, as the practice school was largely regarded as the very center of a normal school at our meeting in Buffalo last summer, and the relation of the normal faculty and students to it is, therefore, a matter of fundamental importance.

F. M. McMURRY.

REPORT OF INQUIRY REGARDING PRACTICE SCHOOLS.

Suggested that a select committee be appointed to report answers on the following questions (others to be added by committee, if considered necessary):

1. Should each member of a normal-school faculty be held directly responsible for a portion of the instruction given in the practice schools?

2. Is it advisable for each professor in a normal school himself to conduct a recitation with children occasionally, allowing students and other professors to be present with a view of offering searching criticism later?

3. Should professors in a normal school instruct their students by essentially the same method as the latter will be expected to employ in the instruction of children?

4. Should most of the observation of teaching that is done by students precede or follow their practice teaching?

5. Should much time of students be spent in the observation of teaching?

6. Should a student in his practice teaching assume full charge of a room, or should he hold only one recitation per day?

7. To what extent is it important in critic work that a large number of persons observe and criticise at length a single recitation?

INQUIRY 7.—MISS MARION BROWN.

KINDERGARTEN WORK IN RELATION TO THE NORMAL SCHOOL.

Number of circulars sent out,	- - - - -	140
Number of replies received,	- - - - -	72
Number of state normal schools with kindergarten department,	- - - - -	15
Number of city training schools with kindergarten department,	- - - - -	5
Number of state normal schools without kindergarten department,	- - - - -	35
Number of city training schools without kindergarten department,	- - - - -	4
Number of private normals with kindergarten work,	- - - - -	9
Number of schools with kindergarten work for observation,	- - - - -	3

Quite an elaborate circular was sent out by this subcommittee. The following would seem to interest this body most:

Question 13. At what age are children admitted to kindergarten practice class?
Answer: Three to six. Majority admitting at three to four years.

Question 14. Do you promote to primary grade by age or development? Answer: Majority promote by development.

Question 15. If attached to normal school, what is the relation of the kindergarten to practice class? Answer: In majority of cases the kindergarten seems to be for purpose of observation by normal classes.

Question 16. Relation of kindergarten training to training in normal school?
Answer: Number of indefinite answers. Majority reply, a co-ordinate department, or sustains a very close relation.

Question 17. What is done closely to relate kindergarten to primary work? About equally divided between an effort by specific work closely to relate them and no effort to do so.

Question 18. Have you a special kindergarten library? Answer: Majority report a special kindergarten library; some reporting it as small. Rest report it as incorporated in normal library. Three answer "no."

INQUIRY 8.—Z. X. SNYDER.

WHAT EFFECT HAVE THE NORMAL SCHOOLS HAD ON PUBLIC EDUCATION?

Number of circulars sent out,	- - - - -	300
Number of answers received,	- - - - -	256

The questions and answers are given below:

1. Do normal-school graduates do better work than those of same age and experience who are not graduates? Answer: Yes, 213; no, 18; not answering, 25.

2. Has the normal school dignified teaching? Answer: Yes, 207; no, 19; not answering, 30.

3. Do you give preference to normal graduates in the selection of your teachers? Answer: Yes, 201; no, 37; not answering, 18.

4. Has it been the influence of the normal schools that has led the universities and colleges to establish chairs of pedagogy? Answer: Yes, 101; no, 27; probably, 64; not answering, 64.

5. Are you in favor of the city training school, and why? Answer: Yes, 147; no, 85; not answering, 24.
6. Taking all things into consideration — importance of the work, tenure of position, salary, etc.—is the course of work offered by the normal school sufficiently extensive and intensive? Answer: Yes, 78; no, 130; not answering, 48.
7. Are there enough normal schools? Answer: Yes, 90; no, 131; not answering, 35.
8. What has been and what is the effect of the normal schools upon elementary education? Answer: Good, 206; bad, 10; not answering, 40.
9. Make some suggestions, the adoption of which would increase their efficiency. Answer: Higher admission, 68; more practice, 37; more professional work, 47; better faculties, 7; not answering, 97.
10. Should they do academic work? Answer: Yes, 74; no, 154; not answering, 28.

INQUIRY 9.—EDWARD T. PIERCE.

RECOGNITION OF DIPLOMAS OF OTHER STATE NORMAL SCHOOLS IN OTHER THAN THE STATE IN WHICH THEY WERE ISSUED.

The following questions were addressed to the state superintendents of the United States. The answers have been inserted:

1. Are diplomas from normal schools of any other state than your own recognized in your own state? Answer: Yes, 15; no, 21; conditional yes, 5.
2. If so, to what extent? If all states are not recognized, name those that are. Answer: Michigan recognizes Pennsylvania, New York, Indiana, Delaware, and Wisconsin; Wisconsin recognizes New York, Illinois, Massachusetts, Pennsylvania, Kansas, and Michigan; New York recognizes by reciprocity.
3. If none are so recognized, state reasons why? Answer: No law, 14; unequal standard, 6; no need, 4; "tit for tat," 2.
4. Do you think it would be well to have comity of states in this matter? Answer: Yes, 31; no, 4; not answering, 14.
5. If such a plan were adopted, would it not be necessary for the normal schools in the several states to have courses of study approximately equivalent? Answer: Yes, 36; no, 3; no answer, 10.
6. Would it not be well for the authorities in the several states to recognize diploma from certain approved normal schools in all of the states? Answer: Yes, 31; no, 5; not answering, 13.
7. What plan would you suggest to make normal-school diplomas national in their significance and legality? Answer: Legislation, 4; N. E. A. control, 2; reciprocity, 4; equality of course, 4; interstate committee, 3; not answering, 29.

In this preliminary report the committee has not deemed it its province to discuss to any great extent the merits or the demerits of the findings in the different inquiries investigated, but to present to the department its investigations showing that there is a field for investigation out of which great good would accrue to the normal schools and to education in general.

There are many problems connected with normal-school work that need more attention than has been given them. But few educational problems, if any, are capable of exact solution. They are all experimental. The process of interpretation is tentative.

1. Inquiries Nos. 1 and 2, Control and Management, indicate considerable unanimity in regard to control and management; with the suggestion that there should be less politics, more centralized power in the head of the school, less influence of local members of boards of trustees. It will be readily recognized that the above suggestions are significant facts. A systematic study of the above inquiries setting forth the best remedies is what will help the entire cause.

2. Inquiry 4. Variations that Exist among Normal Schools on Account of Geographical Location.

You will observe that the report made by President Seerley is clear and succinct. This investigation indicates a distinct segregation on account of geographic location, and probably a tendency still further to segregate. Every geographic center is a part of the national life and force, and it would seem that there should be some common ground, that is sufficiently marked, upon which to unite. An A.B. degree from a reputable institution of learning means so much training—not necessarily the same subjects, but so much training. Now, it would seem that some sort of standard should be established, that the normal schools might command more respect as a factor in public education and thereby accomplish more good.

3. Inquiry 6. What is the Relation of the Practice School to the Normal and to the Public Schools?

The report of Dr. McMurry is sufficient to indicate its importance. This is a problem in normal-school work in which the conditions are not clearly set forth as yet, much less a solution reached. It would seem that it certainly should be the center of life in the normal school. It should be a veritable pedagogical laboratory. There has been too much contentment in normal schools in regard to the practice school. It is quite a machine. It needs investigation and some sort of practical interpretation given it by this body.

4. Inquiry 7. The Relation of the Kindergarten Work to the Normal School.

The investigation of this inquiry shows a very indefinite conception of the kindergarten as a department in the normal school. The lethargy with which the normal school takes hold of movements is one of the reasons why it is seemingly relegated to the rear in educational development. No normal school can claim to be abreast the times in educational sentiment, opinion, and character that has not a well-developed kindergarten department. An exhaustive and keen report on this inquiry and some action toward universalizing the kindergarten will be very beneficial to our department and education.

5. Inquiry 8. The Effect of Normal Schools on Public Education.

(a) An effort was made to determine the opinion of educational men

—superintendents and principals—on the work of normal graduates, on the influence of the normal schools on teaching, and on the preference given to normal graduates. There seems to be a decided opinion in their favor. Yet 15 per cent. and over were very positive in the opposite view.

(b) Investigations were made as to the number of normal schools. True, in this they were influenced by local conditions; but the fact is significant that in those populous states where there is but one normal school the unanimous opinion is that there are not enough. The opinions were made quite emphatic in very many instances. Even in the states having several schools many thought there were not enough.

(c) In regard to what would increase the efficiency of the schools various opinions were given, but chief among them were: A better practice school, a higher standard of admission, better trained faculties, and stronger professional courses.

(d) On the question of academic training there seem to be a very decided sentiment and opinion that they should not attempt it. Make the admission such as to eliminate distinct academic work, is the judgment of a great majority.

From the foregoing your committee is of the opinion, and it so recommends, that the Normal Department ask the general association to make an appropriation to meet the expenses of a committee, whose duty it shall be to make a thorough investigation of the normal-school problem in all its phases and submit the same to this department.

Respectfully submitted,

Z. X. SNYDER, *Chairman*, Greeley, Colo.;

N. C. SCHAEFFER, Harrisburg, Pa.;

HOMER H. SEERLEY, Cedar Falls, Ia.;

EDWARD T. PIERCE, Los Angeles, Cal.;

FRANK McMURRY, Buffalo, N. Y.;

MISS MARION BROWN, New Orleans, La.

DISCUSSION.

PRESIDENT A. R. TAYLOR, of Kansas, inquired whether Item 1, in Dr. Schaeffer's report, brought any information as to the desirability of continuing the present plan of appointing boards of control.

PRESIDENT SNYDER, of Colorado.—The plan is good, and there is no special desire for change. The criticisms are given in the fifth item. The local trustees are said to form attachments for individual members of faculties, and to support them because of personal friendship.

STATE SUPERINTENDENT EMERY, of Wisconsin.—Did the inquiry learn whether these influences operate on the principal as well as the resident regent?

PRESIDENT E. O. LYTE, of Pennsylvania.—Is the board better as a continuous body, with terms expiring at different times?

PRESIDENT SNYDER.—They should be appointed to long terms, six or eight years, and one or two should go off at a time. President Pierce, of California, could give information about that.

PRESIDENT PIERCE, of California.—By our new law there are to be four local boards, one for each of the four normal schools, and these, in conjunction with the governor and the state superintendent, are to elect the presidents. After the president is elected, he becomes a member of the local board. He nominates to the local board all teachers elected by it. After two years of service, teachers are elected for four years, and can be removed by the general board on charges. So little power have the local boards that, whereas our board wrangled last year for a whole day on the election of teachers, the entire work was done last week under the new law in fifteen minutes.

PRESIDENT DOBSON, of Missouri.—Does the board make the same course of study for all the schools?

PRESIDENT PIERCE.—No, sir. It fixes a maximum and a minimum length of time for each subject. Considerable freedom is exercised by the various schools for the arrangement of studies, one school putting a subject in the first term and another the same subject in the last.

PRINCIPAL E. A. SHELDON, of New York.—Should any limitations be set upon the number of pupils that should be admitted?

PRESIDENT R. G. BOONE, of Michigan.—Was there any time to investigate cost, the amount of money appropriated per capita, the financial side?

PRESIDENT SNYDER.—That item was given to Dr. Dunton, of Boston, but he has been ill.

PRESIDENT COOK, of Illinois.—There are things of great importance we are not touching. One of the most important is touched by President Seerley—whether it is advisable to have uniformity, whether we are not in a stage when it is better that the school should be provincial rather than uniform. These precious minutes are getting away, while we are discussing the boards and other items that can be studied from statistics.

Taking Topic 14, I think we want just as many experiments and theories as the human mind can invent. Who has clearly developed a plan for a normal school that can be handed out here? We do not yet know what a normal school is to be. For my part, I am thoroughly opposed to control by one board for all the normal schools of the state; I would have as many boards as there are schools. We want competition developed. Normal schools under a central board will not allow to each an opportunity to show its superior right to exist. I regard this diversity in the country as a very hopeful fact, and so it must continue until many of us know more than we can now know.

PROFESSOR STRONG, of Michigan.—Is not what is said here of diversity in normal schools said also with equal truth of universities?

PRESIDENT SEERLEY, of Iowa.—The section criticised is a statement of fact, not an argument. There seemed to be a call to find out what was the general trend of thought, and I selected catalogues and wrote letters. Paragraph 14 reports that there is no uniformity and no trend toward uniformity. We have a problem in Iowa that is not the

problem in Massachusetts nor the South. I was impressed, in looking the matter up, that the schools of one section resemble one another, but differ in general from the schools of other sections.

PROFESSOR THOMPSON, of Massachusetts.—I would like to say just one word from a state where they have only one board. I can hardly agree with President Cook, at least so far as our state is concerned, that we should have a different board for each school. If any state is to accept diplomas from every school under its control, there should be unity. Mrs. Alice Freeman Palmer, of our normal-school board, says she does not believe that all the schools should be the same. The board lays down certain lines, and then it is left to the principal to differentiate. These things vary in different states. The plan that President Cook commends for Illinois would be bad for Massachusetts.

PRESIDENT SALISBURY, of Wisconsin.—It seems to me that this report on Inquiry 4 might have been headed historical rather than geographical. Brother Cook is addicted to separate boards for each school, we in Wisconsin to a single board. Our state charities were formerly under several boards. They are now under one. We had a proposition to bring the normals and the university under one board. It would be a waste of time for us to fall upon one another in a discussion of this matter.

Dr. Seerley's word *provincial* seems to have a little sting in it. That is a disrespectful word. I believe that in one sense every normal school should be provincial. There is one sentence in this Paragraph 14 that weighs a little upon me: "There is scarcely any reciprocity" and "very little faith in one another's work." Why should there be so little faith in one another's work?

PRESIDENT TAYLOR.—In the development of any idea it seems necessary that we should have more or less of this diversity that has been mentioned. Our friend has suggested that he discovers the same difference of opinion among university men, but there is a general agreement as to what a university should be. I recall that a friend of mine was elected to the presidency of a normal school that had nothing professional but the perfunctory reading of a very small work on pedagogy. When I compare that with the work at Bridgewater, or Oswego, or northern Illinois, I find that the normal schools are ranging all the way from the very low to the very high grade. Now, is it not possible for us to come to some kind of an agreement as to what should constitute, in a general way, a normal school? I believe it would be very unfortunate for us to agree upon all particulars; yet, at the same time, something of agreement would seem desirable.

We have a good many people coming to our state holding credits for two or three years in a normal school or presenting diplomas, and when they come from Pennsylvania, for instance, or from New York, these credits differ in significance. When coming from a state university, their credits do not have such indefinite values.

I made a report on this same question at the Topeka meeting, and when Principal Gray made a similar report before this section at Chicago on this subject, we heard pleas just as strong for diversity and just as strong for unity as now, but the matter was dropped, and here we are at the same thing again. I think this discussion comes from a felt need. Is it not possible to have something more definite? I meet a man not familiar with the normal school, and he asks me what is its work. I do not believe that uniformity means death; I believe that a certain definiteness of idea is worth having. I believe it can come from this afternoon's discussion, and from the continuation of this committee's work.

PROFESSOR GRAY, of Minnesota.—The question is what constitutes pedagogic training, and if this body would reduce to form the definition of a diploma that would have the indorsement of this body, we might gather round a common notion. The National Association of Medical Societies has declared that medical colleges not reaching a certain standard shall not have a recognition. Now, there is certainly talent enough in

this body to define what shall constitute a minimum. I do not see how we can get on any common ground until we define what is common ground. Then, if there be normal schools that can exceed this standard, we bid them God speed. I would urge that this body proceed to define.

PRESIDENT LYTE.— This Section 14 by Dr. Seerley does not give me much concern, but 6 and 12 I feel contain very much criticism, and, I think, just criticism. I do not believe that either New York or Pennsylvania puts academic before professional studies. In Pennsylvania we must do what Dr. Snyder calls academic work, what we call scholastic work. And we have yet to find a student coming to us well enough prepared to dismiss all his academic work.

I think there are a good many schools in Pennsylvania that regard the work done in a model school as the best work. The school with which I am connected regards the model school as the center. If there is this variety in the practice work, I think it is very necessary that we should define in some way what constitutes a minimum amount of training. I find a difference in catalogues and a difference still greater in the attainments of pupils. I find many universities in Pennsylvania whose graduates would not be admitted to the entering class of a normal school.

I am written to once in a while with respect to other normal-school diplomas. Pennsylvania has no law to recognize them, and no state authority could accept them without a formal examination.

PRESIDENT BOONE.— Are there in the Pennsylvania normal schools any not intending to teach?

PRESIDENT LYTE.— Yes, in some schools separate classes are formed for them. In our school most expect to teach.

SUPERINTENDENT MCCONATHY, Louisville, Ky.— The discussion has been too limited. I do not think there is any one method by which you can make a good teacher. I think this provincialism is a good thing, because through this variety of work somebody may discover a better thing than we have known. At the same time, I think you could define the minimum of academic and of professional work. I want to know the effect of passing these pupils through the practice school, how much practice they should have in the two-years' course; also, what kind of professional studies they should have.

PRINCIPAL PRETTYMAN, of Maryland.— It seems to me that this department is where we must distinguish what will create this system of comity between the states. If we are going to have a profession, there must be an amount of preparation therefor. All these questions hinge upon the proposition that a committee shall report a minimum of professional study, the least that can be recognized. If that shall be set up, then it will be an easy matter to receive the diplomas from other states. The experiment was tried in New York, and when they decided on reciprocity, the superintendent was authorized to recognize certain diplomas, but he found he must study each school. There is no such comity in teaching as in law and medicine. I, therefore, hope, sir, that this committee will report to the next meeting.

PRESIDENT COOK. — I was about to rise for the purpose of making the motion to continue this committee to formulate a minimum course, a course which must be attained as a minimum to secure recognition by this department. I shall not regret if there be a sharp distinction between the state schools and those private schools that call themselves normal schools for the one reason that they want to get the patronage of those who wish to teach.

PROFESSOR ROUNDS, of New York.— As to whether there should be academic education in normal schools, I wish that question could be postponed for a few years. When

the normal school sends out a class, it is responsible for the academic training, no matter where that education has been attained. I have worked in two states where throwing out all academic work would have killed the normal school. Even if the high school is in reach of all students, to require all to prepare there would be about the same as requiring that all Milwaukee people living in reach of Hotel Pfister should board at that hotel. Let locality settle where the academic education comes from.

Is it not settled now that practice teaching is a necessary part of a normal school? It is only a short time since we settled it. Now it may be decided that any one of several plans can be accepted, it will be shown that there are several plans now in use that we could not accept. I like that word "minimum," a minimum of scholastic training, of practical training; the minimum of necessity, the maximum of opportunity. Let us mean something, and then we have the right to recognition from universities and from all authorities. Having lined up to that point, we are ready to advance to something still better.

PRESIDENT HARVEY, of Milwaukee.—Suppose this committee goes on and does this work, what will it effect? Whom are you going to affect, what are you going to reach? It seems to me, gentlemen, you are simply wasting time. To say that this shall be the work, which would allow a school to call itself a normal school, is absurd. When you have got it done you will print it, and we will go on doing just the same work as before. It occurs to me that if this body of normal-school people agree on something as to *how* to do work, it will be more to our advantage. There is a great difference between the kind of work possible in Massachusetts and in other localities — as, for instance, in Wisconsin — just as there is a great difference between the work possible now and what was possible twenty-five years ago. There is a difference between what is possible in the older states and what in the new. If you are going to cut off a normal school because it cannot equal the standard of older states, you are doing a wrong thing. The showing of *what* should be done and *how* it should be done is the thing of most value.

PRESIDENT COOK.—I trust I am not trespassing upon the department by saying a word in reply. I do not regard this as a matter of very great moment. Great heavens! Why talk about wasting time? This department has chiefly occupied itself in wasting time since it was organized. Surely the requirements of a normal school may be made sufficiently definite to meet all possible objections. It is not worth while to make a fight on that ground. We have plenty of timber to put into these very things. Let us proceed with the work, and formulate a standard.

HOW MAY THE NORMAL SCHOOL BEST ACCOMPLISH ITS PURPOSE?

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The relation between teaching and learning is made clear through a comprehension of the relation between learning and education. Not every process of acquisition has a creditable educational value. Some learning seems to confer no power, and does add mental impediment. Occasionally real education does result in spite of accumulations of information. It is always helped on by any learning that takes hold upon

first-hand experience and involves a personal reaction. Mere passive receptiveness has educational results of a rudimentary sort only. If by learning, therefore, is meant simple acquisition, a gathering and cumulative process, much taking in and little using, education is learning in an incidental way only. If, however, by learning is understood that positive and aggressive seizing of knowledge, inquisitive, experimenting, testing, using, applying, and the accumulating of interests, and the storing of questions held for answer, then learning and education are correlative terms, coextensive in use, and having a well-defined likeness of meaning.

Teaching may be described as causing to learn in this larger sense: establishing in the child a habit and the courage of independent attack. Every learner, to the extent that he is a real learner, becomes an invader, as the scientist is an investigator. He lays siege to the world of thing and force and spirit, and has faith in himself. The effectiveness of learning is measured less by what is actually discovered or acquired or accumulated than by what one aspires to know or discover, and the effort put forth to know or discover or use. Teaching is the process of giving this trend to mind, and especially to child mind. But no teacher can give this who does not himself possess it. One indispensable quality of the true teacher, therefore, is that he be himself a learner. He must be familiar with the way over which he would lead his pupils. He must be a learner, aggressive, independent, alert, resourceful. Whatever the young candidate knows or doesn't know of subjects academic or professional, as he leaves the school, he has need to have well fixed the habits of the student to be interested and growing; and no normal school, of whatever grade, can be held to have realized its purpose that has failed in a measurable degree to accomplish this as a professional result.

To this end the normal-school faculty should themselves be students, more or less scholarly, but students; lovers of learning, fresh and interested, inquiring and creative. As the vitality of a tree is attested by the fresh branches it sends out, the new wood it is making, the pushing-down of its roots, and, in general, its reaching outward and upward, so must the teacher of teachers be judged by the new fiber he is making and the strengthening of the old. Once learning ceases in the teacher, teaching deteriorates. This year to follow last year's lessons, to add no new references, not even once to have substituted a new topic for an old one, or to have changed their order as a larger vision gave a new sequence, to have had no larger vision, to be satisfied with the old book rather than risk a new one, to perform the same experiments and no others, means in time sterility, if not something worse. An institution's board of control can do no more effective service for its students than to make it easy for every teacher to carry on related studies for himself parallel with his teaching. It is, perhaps, true, as has been said, that "only investigators

can be or are great teachers." They must be interested in problems to be solved, which they are attempting to solve, as a condition of really effective sympathy with children for whom it is made the business to solve problems. The stolid plodder, all of whose days are alike, has little in common with the ambitious, restless, planning, questioning, eager student, or the pushing farmer, or the lawyer who is climbing; and doubts their sanity. No teacher has a right to be a plodder of such sort. If he would be helpful to growing youth, he also must grow. Before applying for admission to any normal school, a young teacher has a right to ask: What are the instructors doing for themselves and their profession? What are they contributing to pedagogical insights? Are they informed as to what is doing in the profession elsewhere? Are they moving along and upward, and do they carry their classes with them? If their own lives are becoming daily and yearly richer, their teaching will probably show a corresponding improvement, and the students will profit by the freshness and vigor of the leadership.

For a like reason, also, the school as an institution must be relatively less of a teaching agency, and more and more of a laboratory; less a place where formal and, perhaps, traditional lessons are to be communicated, and more a means of stimulating an interest in questions of education and the school, and in conditions and means of learning. The remark applies to all kinds of schools, but bears with particular force upon schools for the training of teachers. Here, more than in the college or the university, more than in law or medical schools, more than in the theological seminary, it is a fatal policy to seek to turn out students from any exclusive course of indoctrination. The normal school should be a laboratory where every grade of learning, in its order, is brought to the test. Throughout the course there should be some hours, daily, where students and teachers work together. A normal school must contribute the means and conditions for cultivating the student spirit touching school questions.

Graduates of such a school will be turned out students by habit and spirit; but not scholars. They will be lovers of good literature, alert and interested to question its inner significance; aspiring to be masters of the sciences of life and society; in sympathy with nature's ways, and eager to discover their meaning—well on the way to be scholarly, but not yet learned. They must believe in learning and the regenerations of a liberal scholarship. In their minds, when they come to teach, there must be no half-hearted assent to the doctrine that a generous education pays: pays in pocket and mind and heart. It must be seen by the teacher, and must be made to appear in her teaching, that the coming farmer is made a better farmer to the extent that he is made a better man; so of the housewife, the mechanic, the physician and the dealer, the office holder and

the voter, the teacher and the professional student; the teacher has need to believe in behalf of all these classes, in the wholesome effects, and upward tendency, and multiplied opportunities for gain and effort, incident to a large and accurate training in the schools, and an acquaintance with the results of science, and the achievements of man that endure. The scholar has many chances in life of coming to the top, where the unschooled man has one. The teachers-to-be of our children must see this, and make the vision effective in their teaching; else teaching misses its aim.

But that this belief may take hold upon her children, it must first have found effectual lodgment in her own experience. She must believe in its saving influence for herself and for hers. She must daily practice it. It must be apparent in her conversation. Her library will show it. It will shine out in her manners. Her faith in its power to uplift and refine coarse, rude youth, and the badly born and the ill-conditioned, must be unshaken. That the much-beholding of culture is doing its perfect work in her stimulates a like free course in others. The first step toward the professional teacher has been taken when one has given or has acquired a fixed and serious habit of inquiry, a sane and chastened interest in the busy life that environs us; when studies are pursued, not because they lead to certificates and diplomas merely, and save one from harassing examinations, and are required by boards of education, and appear in the school's published courses; but because they are open doors into an interesting *new world*, and promise coveted relations. Studies then become privileges. Not every student is a teacher, much less every scholar. But the real student has already two admirable qualities that make teaching easy: (1) a full mind, and (2) a growing, filling mind.

This, I take it, applies to all the work of the normal school, both professional and academic. It is no less true of technical and special schools than of the college and university that the end to be coveted is an abiding bias toward learning and skill and right living; and not the possession of any specific learning or deftness or virtue. It would seem to be sound pedagogy, not less than safe theology, to set the mind brooding upon questions of life, in a guided and sober way, rather than learning creeds. Teachers are made professional by sending them out concerned to understand professional problems, not through grounding them in accepted theories. This, as I see it, can in no other way be so well accomplished as by setting them to study educational problems, not learning the conclusions of those who have studied them. To this end intending teachers in the normal school will take advantage of every contribution that really assists in the solution—but accept them warily as solutions. If the purpose of the school were to confer upon its graduates a sure way of carrying on instruction, a recipe that should be valid for all time, a dozen books of formulæ and device might be named

that would well repay mastering. If the work is done in the spirit of conferring any sort of specific or formulary, indoctrinating students with the thought of any exclusive school, or setting up hard and fast lines among devices, as if any treatment were fixed and free from revision, and that teachers are to be manufactured in such way, that fault would seem to be the same in kind.

But if the purpose of the school be to make somewhat self-reliant teachers, students of pedagogy and the art of instruction, growing teachers, whom every day finds more skillful, whose success is to be viewed through the perspective of years, and whose value to the state and to themselves steadily increases, there will be neither attempt to make disciples, as if this school contained the only pedagogic wisdom, nor any clap-trap of device to catch the public eye, and hoist a would-be teacher into immediate recognition. "As he who knows but one language or one religion knows none well, so he who knows but one system of education knows none well." "In every field it is the comparative method that does the best work." "One of the teacher's highest endowments is versatility; and to create this power ought to be one aim of professional instruction."

Normal schools can well afford to take positive grounds against any form of the fallacy that teachers can be manufactured to order, that they can be filled up with an all-sufficient theory, or equipped with any sure specific of recipe and formula that assures them of success. The best the most efficient normal school can do is to have given them a safe start on the way, to have endowed them with right habits of pedagogical study, and a sound interest in these questions. The test of a normal school is what its graduates do, or come to do in the next ten years; not how they teach, alone; but what have they contributed to their profession? Does the influence of the normal school follow them into higher studies? or are they satisfied with being graduates and holding certificates? Of a normal school it may reasonably be asked: How many of its graduates continue their studies subsequently, either academic or professional, in their own school or elsewhere, with teaching in view? What provision does the institution make for advanced pedagogical study? In their course, shorter or longer, do they catch the spirit of the student and crave the opportunity for further preparation? Do they become home students? Follow the alumnæ for a decade, and find where they have studied and what they have studied. How many of them all have received such an insistent bias for the work that teaching has become their mission?

To have justified the work of the normal school, it is not enough that they be made students merely, but students of pedagogy. They are to be teachers, lovers of teaching, interested in the art of teaching, stu-

dents of its principles, acquainted with its history, in sympathy with the child and in touch with child life, and alert to the significance of children's interests and instincts in the institutional life about them. This, as I see it, is the task set the normal school to do; to select from such as apply those who betray a fitness for the training, make clear to them their power and give them faith in themselves for this service; and let its own teaching be such as to show the unfit—unfit either by nature or training—the unwisdom of their choice. To have prepared a few score persons well, so that they are really impressed with the gravity and dignity and privileges of the work to be done for the children and in the schools; who have no thought that their training is complete; whose studies planned and in prospect outnumber and outweigh the studies done; who believe in normal schools, and have acquaintance with and revere some real specimens of living and teaching on high planes, and feel growing within themselves a like power—will do more to win among people respect for teachers and their professional training than a school in every county, if it be a pretense, and work expedients, and conceal a meager culture with a veneering of device.

Summarizing the points of the paragraph, it may be said that the normal school that would have the most wholesome and far-reaching influence upon its students, and through them, upon the profession, should:

(1) Resist the ever-present temptation to "method-cramming," that "specific and fatal disease" which Ziller ascribes to normal schools as he knew them, and from which, in this country, they are not by any means so free as they might be.

(2) But it should equally avoid the narrow proselyting spirit that seeks to indoctrinate students, making them disciples of a school or a system, and not interested, open-minded learners, and cautious critics. What one of our own number has called "the intolerant orthodoxy of one method" is always to be shunned.

(3) The school should further seek to endow its graduates with right habits of study, and a vigorous and far-seeing interest in questions of schooling and child training, rather than in artificial resources and a prescriptive order.

(4) In fairness to the children of the state and the public welfare, the course of instruction should be made a process of selecting among candidates, weeding out, not the slow and the unfavorably conditioned, but the incapable and the unfit. Whatever their scholastic and other qualifications, students who fail to give unquestioned evidence of a sympathetic insight into child life and processes of training should be advised to try something else. Both the administration and the instruction of a normal school should be such as to exalt the dignity and the attractiveness of the teacher's work with whatever age of children, and freely

indorse such as discover the professional temper. Better fewer people of the right quality, with a minimum preparation, than large classes indiscriminately certificated without regard to personal and professional fitness. Pedagogical preparation, not less than other technical training, has this element of exclusiveness, being selective and critical, and must reserve the right, in the interest of the state's wards, to close its doors against the unfit.

As a companion thought to what has been said of the student habit as a quality of the successful teacher, it will be evident that normal schools which are really intended to make *teachers*, and not disciples of an institution, must employ courses greatly extended beyond the rudiments of history and the sciences, methodology, and pedagogics, with which most of us are now content, and must be ready to contribute to a many-sided interest in the subject-matter of schools and education. What a recent writer delights to call "the intolerant orthodoxy of one method" may, or may not, be properly characterized by the phrase, but it must be admitted it often stands for a narrow and unsophisticated view of a very complex process. When education, not to say teaching, meant to master the three R's, the preparation for teaching was a simple thing. When these and other subjects were seen to be the means of culture, and education was recognized as a mental process, the problem was complicated. Along with the doctrine of an indifference of means within certain limits, leaving the teacher an option in his choice of subjects, method became a thing of abstraction, and the effectual training of teachers a difficult task. When to this conception there was added the comparatively modern interpretation of education as being a social as well as an individual process, and schooling, as fitting one for preparation in an interminably complex conventional and institutional life, the preparation of teachers came to take on the character of a highly developed profession. If there be remembered, also, the emphasis currently put upon the cultivation of the sensibilities and the moral and physical natures along with the intellectual, an appropriate question of the normal schools would seem to be: "Who is able for these things?"

In the preparation of teachers, therefore, relatively more emphasis must be put upon the racial and social aspects of education. The great problems of the day are distinctly social problems. They not only claim more attention from the platform and the pulpit and the press, but they seem, of all human interests, farthest from settlement. Their solution is beyond legislation, because they concern the heart and human instincts. The church cannot effect it alone, primarily because the problem concerns so many whose interests lie beyond the direct influence of the church; but also because, except with a small per cent. of its membership, it has to do with adult conditions only. The solution must come from the

schools ; and must start with the earliest years. How to get along with others, and save one's self-respect, and the internal initiative, and safely resist being dominated by the machinery of life, and conventional restrictions, concerns the curriculum and teaching of the lowest grades. Indeed, to the extent that lessons of co-operation fail of mastery in the grades and among children and youth, and the youth slip into manhood selfish and suspicious, and improvident, and ambitious beyond their condition, any social reformation is either impossible or transient. The schools must be trusted to make real any coveted social improvement.

If the subject-matter of the elementary courses should remain just as at present, there would still be need of teachers who comprehend their enlarged function. Teachers who understand the use of the elementary subjects as giving information merely, or as means towards further study, or as furnishing a guide to conduct, and are able to administer the course to these ends, have done much. But the teacher herself will have need of far more extensive knowledge, and especially knowledge of type-forms ; will have need to have acquired for herself right habits of study and its necessary tools, and to be familiar with the conditions and limitations of conduct, both social and personal, for which schooling is to furnish a guide. And as a large part of conduct concerns one's social relations, in a conventional way, or in matters of business, or in civil affairs, or in domestic intercourse, or, finally, in ethical and religious interests, the preparation of the teacher must be made to include, as it appears to the writer, an increasingly larger element of training on this side, and the introduction of more work in the so-called humanities. Hence the importance attached to the historical and ethical courses ; studies of man and his achievements ; the conditions in person and environment under which he has attained and held his best culture and power ; historic instances of both at their best estate ; geography in the larger and modern sense ; economic science, fixing man's relation to nature, his dependence upon it, and his use of it, through following up his inventions and discoveries, and their relation to his comfort and happiness and efficiency ; art and its development, including the social and intellectual conditions that have helped it on, or hindered it ; the institutions and regenerations of religion and the church ; the general philanthropy and public responsibility for individual conditions ; the civil government and its relation to the common welfare. And all of these should be studied not at all, or alone, because they are history, or science, or art, or religion ; but because they make clear this larger relation of the individual to society, and its institutions ; his dependence upon them and his use of them ; and the possibility that the school and intelligent instruction may fit him for a richer participation in their power and privileges. They become professional subjects, and should be pursued by the

young teacher for professional ends. They constitute the more comprehensive psychology, the psychology of the community, comprising an insight into the forces and processes and conditions of culture and improvement in bodies of people, organizations, and neighborhoods. Child study for the teacher must be made to include, or be supplemented by, a like study of communities also, of social groups, and organized life, and the individual as he appears in combination with his fellows. And every training course, whether longer or shorter, should be made to include its proportioned view of these subjects, as a sound basis for the more detailed and pedagogical and critical studies of the elementary course, and the order of presentation.

It will be seen, also, how important it is that the teacher be familiar with and habitually employ the general principle of evolution in the interpretation of social and culture questions. It vitalizes most investigations to carry them on in the perspective of their antecedent investigations. And, in a particular manner, this is true of all matters of education. "There is no phenomenon so stupendous, so bewildering, and, withal, so interesting to man as that of his own evolution in society." Here is the real process of education. To comprehend the aims and means and steps in school education, where individual growth is directed, requires an insight into the processes of racial growth which, for the most part, is undirected. Evolution has been described as "the natural directory of the sociologist, a guide through that which has worked in the past to what may be expected to work in the future." It is not less a guide for the individual, and even more significant for the teacher. "Here, for each one, is a new and impressive summons to public action, a vocation chosen of nature, which it will profit him to consider, for thereby he may not only save the whole world, but find his own soul." And this process of self-orientation—"finding one's own soul"—is a fundamental one for him who would teach.

It was the scholarly Professor Caird who said: "The study of the historical development of man, especially in respect to his higher life, is not only a matter of external or merely speculative interest; it is closely connected with the development of that life in ourselves. We learn to know ourselves, first of all, in the mirror of the world; or, in other words, our knowledge of our own nature and its possibilities grows and deepens with our understanding of what is without us, and, most of all, with our understanding of the general history of man. . . . It is only with a deepened consciousness of the world that the human spirit can solve its own problem. . . . The inner life of the individual is deep and full just in proportion to the width of his relations to other men and things; and his consciousness of what he is in himself as a spiritual being is dependent on a comprehension of the position of his individual life

in the great secular process by which the intellectual and moral life of humanity has grown and is growing. Hence, the highest practical, as well as speculative, interests of men are connected with the new extension of science which has given fresh interest and meaning to the whole history of the race."

It is not meant, of course, that the normal school should include in its instruction a formal study of evolution; but that such school relations as are made subject to study shall be so employed as to establish in teachers a habit of historical interpretation, a keen appreciation of the developing process, sensitive to dynamic relations in mind and heart; a conviction that whatever has virtue in human interest for the individual or the community is part of an unfolding series; and that, in the improvement of mankind, or the individual man, in school or out of school, while one series may be broken, the break only gives place to another series. The principle of becoming—the new from an old, the heterogeneous from a less heterogeneous—is everywhere present.

The general history of culture, the development of educational doctrine, the growth of the elementary course, the origin and progress of the school and its organization, the expansion of the world's store of science, literature, art, history, and industry, available for the youngest children, are subjects of study for which the normal school should give every teacher a lasting introduction. Sound insight here must form the only enduring basis for intelligent perception of pedagogical truth throughout the school.

Not only will more emphasis be put, in the normal school, upon the racial and social aspects of education, and, therefore, upon historical and ethical courses, and upon the principle of evolution in the interpretation of social and culture questions, but a new importance will attach to constructive and creative exercises. Whatever throws upon one the necessity of an independent use of material, or encourages resourcefulness in initiating or handling or applying experience, or arouses invention, or cultivates skill, or makes for leadership, or intelligent and fearless criticism, belongs to this group of constructive and creative exercises. They are valuable—invaluable—as instruments of education for anyone, whether in general culture or technical schools. But they are also valuable in the preparation of one who is to teach the arts which they represent. In a much higher sense, however, they are useful in all teachers' courses in fixing correct conceptions of the learning process, and so the teaching process, and the conditions and coveted results of a wise system of training. Any system of professional schooling that magnifies discipleship, or minimizes original quest and free performance, is of doubtful value to the teacher.

On the side of training, however, most normal schools maintain depart-

ments for observation and practice. But here, again, it is submitted as the doctrine of this paper that the most effective process of fitting to teach lies in the intelligent effort to teach or observe good teaching, with an open mind, eclectic and eager, groping and growing, using every means of helpful direction and re-enforcement, testing and comparing, estimating in an impersonal way one's own successes and failures, experimenting up to one's best insights; all the time anxious to find a right way for the practice, rather than copying another's way or adopting his interpretations, however excellent they may be. Better to have tried and lost than to have won without the trying; for what is so won belongs to the surface only and is transient. And the need of the teacher in training is for an abiding zeal, intelligent and full of faith, that thrives with time.

The training school obviously comprises three somewhat distinct functions: (1) as a test of educational doctrine; (2) as a test of pedagogical practice; and (3) as an exposition of accepted doctrine and practice. This last compasses the most immediate need, most felt, and most urgent. The temptation is always strong to give teachers some specific for present use and local distinction; a way of doing things, a body of rules and formulæ. But I am persuaded that, whatever the practice of the schools we represent, the most of you will agree with me that better than a way of working for the teacher, who is a student, is a clear notion of what is to be accomplished. The bias of normal schools, *in practice*, is toward this third function; and it seems to the writer unfortunate that it is so. Let us not forget—*we* shall not, probably; but let us not so teach as that others can forget—that normal schools exist for the establishment of a correct conception of education among intending teachers, and conferring upon them a disposition and resourcefulness to work out their conception with children.

This is not something to be passed upon and established by any one or any group of us. We shall not settle it by thinking upon it simply; much less by working our own points of view alone. The final questions of education lie outside the field of dogmatism. There is need that every one of them at some time be made the subject of test; just as hypotheses, however probable, debatable theories, new or recent inferences, are first, and often, and always with any accessions of light upon related questions, submitted in the laboratory for verification. This, you are aware, is done, not when there is doubt alone, but where the probabilities are strongly in favor of the hypothesis. Touching gravity, and electricity, and the vegetable cell, and nerve currents, and physiological functions, nothing is taken for granted that can be brought to the test of experiment. Why should the attitude be different toward spiritual growth, its means and conditions? toward standards of efficiency, motives and pur-

poses in education, and the elements of wise teaching? Obviously every training class connected with any teacher's school is a mark of the conviction of the similarity, if not the identity, of the two problems. In the training school, among other functions, educational doctrine must be brought to the test. Here, and throughout the institution, there should be the freest discussion of educational problems, in a philosophical and critical way, with a minimum of personal bias, and a strong rising above provincialism and expediency.

Teachers of adult classes have many opportunities for detecting lines of strength and weakness in elementary teaching, and should be helpful in reviewing methods. But a larger service will come from them and from us all when, freed from dependence upon mere scholastic standards, we shall find our first real duty to be, not projecting and perpetuating our own pet theories, but the effort to establish and make clear to teachers, ourselves included, a reasonable and working conception, tentatively held, of what education, as directed in the schools, aims, or should aim, to do for the individual and for the community. The training school, once comprehending such question, should be left free and unhampered to give it a fair trial and submit an answer. Every one of us is interested in seeing how supposedly sound educational doctrine sustains itself, recovers or fails at the hands of authoritative teaching.

Given this clear picture of the function of teaching, the means to be used and the steps to be taken, both become important. For the accomplishment of an educational result there may be several sets of means available. *Usually* this is the case. If there is any one principle of pedagogy, more than another, for which the reader stands, it is that pedagogical training does not mean the mastery of any fixed and unquestioned way of doing any part of the work of instruction. There is, so far as he has been enabled to see, no set and exclusive, unmatched right way of conducting any lesson, or developing any desired mental habit, or giving any worthy moral bias. There are, nevertheless, right ways and wrong ways of most undertakings. Among right ways some are better than others—more productive of good or more economical. This is a better way for one teacher, that for another. With one group of children a practice fails that has had marked success with others. A habit of critically estimating the effectiveness of the several ways of reaching a result, rather than the mastery of any plan, or scheme of lessons, or sequence of steps, or form of questioning, is the subject of training-school practice. There must be something more than the ability to compare devices and teaching directions; the school must fix *the habit* of doing so, and cultivate a sense of appreciation of the better way, and why it is the better way, and a disposition to choose the better way successively—better ways, and the best way—at whatever cost of preparation

and inconvenience and time, if only the quantity and quality of results justify.

Omitting from the present consideration the candidate's practice teaching, of so vital significance in his training, this may be said: If graduates are sent out from our normal schools in sympathy with the practice as well as the theory of their chosen profession, growing, mentally and morally alert to its dignity and the value of its public service, interested in and on the road to a larger knowledge and surer skill—the school may be said to be well on the way towards realizing its purpose.

DISCUSSION.

PRESIDENT ALBERT SALISBURY, State Normal School, Whitewater, Wis.—If “brevity is the soul of wit,” we who “discuss” papers must be witty perforce. Confined to so narrow limits, our views must be hinted at rather than expressed. The question, “How the normal school may best accomplish its purpose,” involves an earlier question, What is the purpose of the normal school? As bearing upon this question, some things said by John Cotton Dana in the *Popular Science Monthly* for July, 1897, concerning the public library deserve consideration, being equally pertinent here. Slightly paraphrasing his language, we may say: The public owns the normal school. The means of its support are taken by force from the pockets of the general public. This fact sheds much light on the question of normal-school management. It means that the normal school must be fitted to public-school needs. It must do the maximum of service at the minimum of expense.

The American public-school idea implies an army of teachers. But no great proportion of the human race are teachers by birth or natural instinct. To secure even moderate qualifications in so large a body of teachers as is necessitated requires adequate provision and machinery for converting such material as can be had into as competent a teaching force as human possibilities will allow.

The normal school is charged with this task of converting raw material into acceptable teaching force. It is, therefore, pre-eminently a practical agency, aiming at definite, practical results in the interest of the whole community.

It follows that we must keep near the earth in our study of the normal-school problem. We do well to analyze and philosophize and ponder the ideal; but we must ever return to the practical questions: How can normal schools best serve the interests of the communities by which they are supported? How can the “greatest good to the greatest number” be realized in their administration? The answer involves considerations of quantity as well as *quality*. The problem is not simply how we shall most perfectly prepare a few for the work, but, also, how we shall present to the state large numbers made *more fit* for the handling of its children than they would otherwise have become.

No exception can be taken to the main proposition of Dr. Boone's paper. It is true that the good teacher must be, first of all, a good learner, of an inquiring mind. Nothing can be done for teachers of greater value than to make them “concerned to understand professional problems.” The “abiding bias to learning and skill and right living” is the best thing that we can give to anybody, whether teacher or otherwise. But here we just reach the practical problem. Is it possible to give this bias without “the possession of

any specific learning or deftness or virtue"? Is it possible to give aptitude and power, except as the direct outcome of intellectual mastery, of actual learning; and if so, *how* is it possible? We believe that it is, in a sense, both possible and desirable; but can anyone formulate or describe the process? This seems to me the practical point of attack.

But we must do more than develop the inquiring mind in our pupil. He must be taught to *love* and *honor* the teacher's vocation. I believe that learning, scholarship, may be carried to such a point as actually to destroy, or prevent, real teaching power. The ruling interest becomes an interest in philosophic abstractions and systems rather than an interest in embryo human character and its development.

The proposition that the normal school must be "relatively less a teaching agency and more a laboratory" seems to me to be a questionable inference. All depends upon what is really meant by the term "laboratory." If it is meant that the normal school should be an educational experiment station, I must enter my dissent. There is need of educational experimentation; but this function would seem to be more in the line of university work, when the universities wake up to it, as a few are doing, notably, The University of Chicago. But it would be extremely unfortunate for the normal schools to send out a callow brood of experimenters, thinking that nothing has been settled in all these centuries in the way of educational theory or practice. Normal-school graduates should go out, not as dogmatists, neither as iconoclasts, but with a reasonable faith in the best that has thus far been discovered and formulated. In short, I believe that the relation of normal schools to the public requires that they shall be somewhat conservative in their policies; not hide-bound, nor blindly conservative—heaven forbid! but wisely and cautiously progressive, remembering how many things educational innovators have to unlearn.

It is, indeed, time to lay more emphasis upon the function of the normal school as a selective agency. It should not be content to train simply those who come to it unsought. It should look out and reach out through all its territory for promising youth who can be drawn under its influence. The teaching mind should be sought out and enlisted; there is no superabundance of it anywhere. But still more urgent is the obligation to weed out "the incapable and unfit," before they shall fully and permanently inflict themselves upon the children of the land as teachers "for revenue only." In Wisconsin it has been ordained by the regents of normal schools that any unpromising student may be eliminated "by notice from the president [of the school] that in his judgment such person will not become an apt and suitable teacher." This is simply the logic of the situation. The normal schools have no right to boost stupidity and woodenness into the teacher's seat, though they are now doing it to a considerable extent.

Time permits me to touch upon but one item further. If the state normal school has any right to exist at all, it exists for all the people. It should carry itself to all the people. It must multiply and distribute itself so as to come within easy reach of those willing to submit their talents to a course of pedagogical training. The normal school can never accomplish its true mission in those states whose policy is to build up one great school instead of a system of schools widely distributed and wisely co-ordinated. You cannot bring the prospective teachers of a great state to one normal school; you must carry the normal school to the teachers.

DR. E. A. SHELDON, of Oswego, N. Y., continued the discussion, giving high praise to many points in the western plan. He expressed especial admiration for the western plan of receiving well-accredited graduates of good high schools without examination. This made the normal school an integral part of the public-school system, just as the high school itself is. He thought it right to accept good high-school preparation at its accredited value, as well as all preparation in the common branches that had been adequately reviewed in the high school. He was not so sure that our normal schools

were meeting the need of teachers for the rural schools. He would have three classes of normal schools—one to prepare teachers for the district schools, one to prepare teachers for the grades below the high school, and one to prepare teachers for the high schools. He also thought that most normal schools are too large to make it possible to secure the requisite amount of practice teaching. He would keep the membership of a normal school below 350.

PRESIDENT PIERCE, of Los Angeles, Cal., was of the opinion that teachers of rural schools need as high preparation as teachers of the city schools. He would make the examination of teachers more stringent, and so avoid the great surplus of incompetent certificated teachers.

PRESIDENT SALISBURY had found that high-school graduates do not know common-school subjects well. In the main, they have not reviewed them adequately in the high school. Some agreed with Dr. Sheldon that the unity of our public-school system still demands that these graduates be received without examination and credited in full for the work done there.

DEPARTMENT OF MANUAL AND INDUSTRIAL EDUCATION.

SECRETARY'S MINUTES.

THURSDAY, JULY 8.

The meeting was called to order at 2 : 45 P. M. by President Oscar Clute, Lake City, Fla., President of the department, who read an address on the subject, "The Head and the Hand."

The Committee on Nominations was named as follows :

W. H. Chandler, Madison, Wis.

J. L. Snyder, Agricultural College, Mich.

H. H. Seerley, Cedar Falls, Ia.

A paper was read by Edward O. Sisson, Director of Bradley Polytechnic Institute, Peoria, Ill., on the subject, "Some Mental Results of Tool-Work." Discussion by A. H. Chamberlain, Director of Sloyd, Throop Polytechnic Institute, Pasadena, Cal.

President W. D. Parker of State Normal School, River Falls, Wis., read a paper on "Some Possible Relations of Normal Schools to Manual Training." This was discussed by President Homer H. Seerley of the Iowa State Normal School, Cedar Falls.

The Committee on Nominations reported as follows :

For *President*, Edward O. Sisson, of Peoria, Ill.

For *Vice-President*, Wm. R. Lazenby, Columbus, O.

For *Secretary*, Judson E. Hoyt, Menomonie, Wis.

On motion, the Secretary was instructed to cast the ballot for the persons named, which being done, they were declared elected.

The following resolution was presented by Professor George Robbins:

Resolved, That a committee of five be appointed by the chair, to inquire, first, what influences tend to promote, and, second, what influences retard, the progress of manual and industrial training in schools; which committee shall present the results of its investigations in a written report at the next annual meeting.

The resolution was adopted, and the following were named as the committee :

Professor George Robbins, John Worthy Manual Training School, Chicago.

President J. L. Snyder, Michigan Agricultural and Mechanical College.

Principal A. J. Rogers, East Side High School, Milwaukee, Wis.

Superintendent J. E. Hoyt, Stout Manual Training School, Menomonie, Wis.

The meeting then adjourned.

JUDSON E. HOYT,
Secretary.

PAPERS AND DISCUSSIONS.

PRESIDENT'S ADDRESS.

THE HEAD AND THE HAND

BY OSCAR CLUTE, PRESIDENT FLORIDA AGRICULTURAL AND MECHANICAL COLLEGE, LAKE CITY, FLA.

Probably no well-trained man can converse for a short time with a good mechanic without being convinced that the mechanic is, in the true sense of the word, an educated man. That is, his mind has been trained to think and act correctly. He knows the qualities of the materials with which he works, and is able so to use those materials as to produce the desired results. He will show clearly the points wherein the materials are good or bad, he will state clearly what the good workman can do with the materials, and he can use the materials in the most efficient manner for making any product in his line that is desired. That is, the good mechanic observes carefully, he compares accurately, he judges correctly, and his hands work with skill. Now, observation, comparison, judgment, the ability to do, are powers of the mind. In the mind of the good mechanic these powers have become well trained, though his days in the ordinary school have been few or none. If we find the mechanic a well-educated man in some respects, though he has not been a student in any school, there must be something in his daily work which has educated him. It is worth while to consider this for a few moments.

There is a very close dependence of the head and the hand upon each other. Often the commands of the head cannot be executed unless the hand be strong and well trained. Always the hand is powerless unless the head issues commands, and guides every effort. I sharpen my pencil to facilitate writing only by the head using the hand to give movements to the knife. The carpenter can make a box when his head is able to direct the hand to saw, and plane, and hammer correctly. The horticulturist by brain-work controls hand-work. He clears off trees, removes stumps, plows, plants, fertilizes, cultivates. After years of care he gets the orchard, fragrant with bloom in the spring time, filled with the melody of birds, laden in after months with fruit more luscious than apples of Hesperides. Through the painter's head flow visions of entrancing beauty, and his brain guides his skillful hand in the effort to reproduce the vision. He stretches his canvas, puts some bits of color on his palette,

takes in hand his ready brush, and soon upon these few square feet of canvas gleams forth the grass of June, brooks dash through the meadows, mighty trees hold aloft their verdant arms, and the deep sky bends above in glowing beauty, while everywhere through the picture there is a subtle presence that cannot be told in words, but by which the artist's hand has faithfully expressed what his soul has seen.

In your home, as twilight comes on, before the lamps are lit, your daughter sits at the piano. She is one whose ear can catch the melody of humming bee and singing bird, of roaming brook and wind-swept tree, of the rolling thunder among distant mountains, and of the tumultuous seas when smitten by the tempest's power. She can read and appreciate the scroll whereon some master mind has written the symbols to guide her hands upon the keys. The piano is dead before her, just a box of wood, holding an iron frame work, across which are stretched some wires that may be struck by the hammers when the keys are touched. Her hands touch the keys, and at once the piano awakens to life. From the vibrant wires come strains as varied as the thoughts, passions, and aspirations of the player. To him who has the hearing ear the music brings the sounds of bee and bird and brook; of sighing grass and whispering pines and raging sea; of mighty tempests sweeping through mountain gorges; of reverberating thunder that falls from riven skies; of the songs of progress, of war, of victory, of triumph; or, in calmer hours, he hears the gentler strains of love, aspiration, and worship.

Thus everywhere, in all departments of human thought and activity, the trained hand is the willing and efficient servant of the trained mind. It is the delicate instrument which the head uses to do much of its finest work.

A large part of education has to do with the training of the hand to follow accurately the commands of the head. In its efforts to guide the hand the head itself is trained. Writing, drawing, painting, playing upon musical instruments, laboratory work in all the sciences, are but examples of this training of the hand and the head together. While this has always been the case, it is only in recent years that hand-training has taken a recognized and honored place in courses of education. After a long process of evolution, during which it has passed from ideal to ideal, education today recognizes that hand-training is an important factor in head-training. Leading educators everywhere are advocating it and introducing it into courses in their schools. The manual training school of Washington University in St. Louis was one of the first to adopt a complete course in manual training, and has been one of the most successful in carrying it out. Tulane University in New Orleans has not been far behind. The Manual Training School in Chicago has done service that has attracted the attention of the country. Many other schools, north, south, east, and west, and in countries beyond the sea, have

applied it. Wherever carefully adopted and wisely carried out, the sweep has been triumphant. The students are interested, look upon their work with delight, get their other lessons better, remain longer at the schools, are better trained in mind as well as body, and obtain that skillful control of the hand that is invaluable to them, whatever their calling in life may be, and that gives them ability to enter any of the mechanical pursuits with much better chance of success.

In spite of this general success, there are some who fear. They fear especially that manual training schools will turn out men and women who in some way will be lacking in power of thought, in force of will, in business, and literary and moral perception. The fear is groundless; the results already reached by manual training schools prove this. Yet this fear is an honorable one; it is grounded in the desire to secure such education as shall make able and moral men and women. It, therefore, should receive our respectful attention.

Education should do for us at least two things. It does much more than this, but certainly it should do this much:

First, it should teach us facts about many things; that is, it should give us knowledge.

Secondly, it should teach us to think and to act clearly, correctly, and forcibly; that is, it should train the mind to have strength, power, force in all the ways in which the mind acts.

It may be truthfully claimed that manual training teaches facts, gives knowledge. But on this I will not enter now. In the other direction—that of developing power in many of the faculties of mind—manual training has superior merits. Let us see.

All educators are familiar with the difficulty of getting pupils to give close attention. The mind wanders from the subject before it; flits from subject to subject, dwelling only a moment on any one. Only by overcoming this inattention can the student be led to knowledge and power. Manual training in the kindergarten, the drawing room, and the shop aids wonderfully in fixing the attention. The student is easily led to attend to that which interests him. He is interested in tools and in the things he can make by their use. He thus forms the habit of attention, and he finds that, in proportion as he holds his mind intently upon his work, that work becomes easy and pleasant. He begins soon to attend carefully to other lessons and other work, and the habit of attention is strengthened. By and by he is able to concentrate his mind upon any subject and to hold it there for a long time.

Another difficulty which educators meet is the inaccuracy of pupils; the spelling, the reading, the drawing, the writing, the laboratory work are inaccurate. Unless accuracy can be substituted for inaccuracy, the students' lives will be failures.

The boy or girl at work with tools soon comes to realize the necessity of accuracy. The saw must be guided exactly on the line; the plane must be carefully set; the chisel must not run too deep; the block of wood must have its corners square, it must be neither too large nor too small, even by a hair-breadth; the pieces that make the joints must fit each other perfectly, or the joint shows gaps that will condemn it. It is at first a grievous thing to find the work of a day or a week thrown away by the teacher with a zero mark, because it is not accurate. But this steady rejection of inferior work, coupled with the pleasure the student feels when a piece of work is accepted, leads to such care as brings, after a while, accuracy in every piece of work. If accurate in the shop, he will be accurate in other exercises. The habit of accuracy is formed. He is discontented with himself unless all his work and all his lessons are well done. This habit, carried into all the work of later years, gives him an immense advantage.

Impatience is one of the most common causes of failure in life. We cannot wait for the slow but sure process of nature. We would learn all music, all mathematics, all chemistry, in one term. We would recover from the most serious illness in a day. We would reform the city, the state, the nation, in a single effort. We cannot endure delay. We despair of success if our efforts do not bring immediate and large results. Finding that the work in hand must be accomplished slowly, we give it up and begin something else, expecting that this can be done with immediate success. After a time we find that this, too, moves slowly, and it is given up for some enterprise around which our glowing imagination throws a charming halo of speedy results. No one thing is followed long, hence in nothing do we really succeed. Now, the student who is being educated through the hand finds himself at every turn trained to patience. He begins, perhaps, with saw and plane and square to make a small piece of wood smooth and true. He smiles a little derisively when the teacher gives him a task which seems so simple. He begins confidently. But the tools are new to his hand and will not move just right. Somehow that special piece of wood is most difficult to shape. After a much longer time than he expected he finishes the work and takes it to the teacher. He is surprised that the teacher promptly rejects it. The teacher applies the square, and lets him see how untrue are the surfaces and angles. With another block he is again set to work. The derisive smile has disappeared, but he is still sure that a task so simple can be done quickly. He works now somewhat more slowly and carefully. When the work is done, it is taken somewhat less confidently for examination. Again the teacher's practiced eye, and the relentless square, show imperfections. So it goes from day to day, until at length the hand gets power to guide the hand with greater steadiness, and the eye can see

more accurately. By and by the exercise is accepted. As the work goes on from term to term, from year to year, the student becomes more patient and more painstaking. He thus in time becomes more patient with the limitations, the difficulties, with which he will surely meet in life.

A common remark about a person is, "his judgment is poor," or "his judgment is good." If the man is not able to compare fact with fact, condition with condition, and come to a rational conclusion as to what should be done, or should not be done, we say he lacks judgment. If he does so compare, and does come to well-grounded conclusions, we say his judgment is good. In the exercises of manual training schools there is constant need for comparing and judging. At every point the student must compare tool and material and work and result with the pattern and the ideal, and judge as to whether it is right, in good condition, well done, or ill done. He thus slowly comes to recognize the importance of slight differences and slight resemblances, and to give them weight in the judgments he forms. When, in after years, he finds himself surrounded by conditions that demand swift comparison and prompt decision, his training does not fail him. He is equal to the emergency. As a rule he will then find that he sees the end from the beginning, and that his swiftest judgments have been wise.

The leader in business, in education, in religion, in politics, must have perfect control of self. Indeed, the merely successful man, if he be not a leader, must not be wanting in self-control. He who fails in this fails of the highest material success, and he fails especially in the cultivation of that noble inner force we call strength of character. In the exercises of the manual training school there is not a movement, not the use of a tool, not the simplest exercise, that does not require control of self. Let the boy become a little excited, and fail to control the head and the hand, and in a moment his joint is ruined, his pattern for casting is spoiled, or the casting itself is rendered useless. Let the girl even for a moment allow her attention to wander, and her unsteady hand has made a false stroke, and the carving on which she has spent many days is marred. That one false stroke cannot be remedied. To keep the carving now would but remind her for years of the thoughtless second. She throws it sorrowfully on the fuel heap, and, as the lines around her mouth assume a firmer tenseness, she determines that the next carving shall not be spoiled by the one moment in which self-control failed. How happy will it be for boy and girl if this training of the shop, added to the training of the class-room and laboratory, shall in the end give them control over their best friend and their most dangerous enemy, the self!

I have spoken thus far of the manual training acquired in the shop. All that has been said in its favor applies with equal force to the training in the garden, the orchard, the farm, and the barn—the garden and the

farm, in their varied kinds of work, in the noble material body, vivified and directed by the noble mind in which dwells the power of close attention, of perfect accuracy, of unconquerable patience, of rational judgment, of thorough self-control. And may we not believe that such qualities of mind will result in that pure and noble character which is the highest expression of humanity?

I once attended the dedication of a beautiful church, which had been built by a wealthy gentleman as a memorial to his father and mother. As we entered the edifice, which artisan and artist had striven to make as beautiful as possible, we saw at the opposite end of the church, high over the pulpit, a large window of stained glass. Its left half showed a young and sturdy blacksmith at his anvil. Its right half showed a young and beautiful woman at work with a spinning wheel. I learned that the two figures were portraits of the father and mother in their younger days, when the father had been a workman in a machine shop, and the mother a spinner in a cotton mill. They had done fruitful work, they had honored their calling. With their savings the father soon owned a small machine shop; later he owned many mills and accumulated a large fortune, which enabled the son to enjoy all things which money will command. The son's own early life had been spent in the work of the mills. When, after years of active leadership in the great world of industry, the father and mother passed on, the son was not unmindful that it was the hand work of his parents in their early life, guided by heads in which were trained mental powers, that had laid the foundation of the fortune that now put him among the most wealthy of the land. So, when he built in their memory, he put, in the place where all who entered the church must see, their portraits engaged in the honored labor of their younger days. That magnificent church, and many other philanthropic works, had come from the hands and the heads of the young workman and his wife. Now, all the results of their labor, and that of the son also, were consecrated to mental and spiritual uses, and so were uplifting humanity.

Let the clear head guide the hand; let the skillful hand obey the head; then let the wealth which their joint labor wins minister wisely to human needs. So shall both hand and head be servants of the Most High.

MENTAL RESULTS FROM MANUAL TRAINING.

BY EDWARD O. SISSON, DIRECTOR BRADLEY POLYTECHNIC INSTITUTE,
PEORIA, ILL.

The title of this paper was framed with the intention of including intellect, sensibility, and moral nature. It soon became evident, how-

ever, that my own power and time, and the limits of the paper, were inadequate, not only for treatment of the triple subject, but even for any one division of it. Hence I may be allowed to substitute for "Mental Results" the topic "Intellectual Results," and, even after that limitation, it is with great hesitation that I present a paper which is necessarily brief and crude on so great a topic. Moreover, the demands of brevity have sometimes enforced a dogmatic form of expression which does not well suit a subject of such difficulty.

It is not necessary, in this audience at least, to emphasize the fact that the term "manual training" must shut out technical and trade shop work, neither of which can need any defense.

The reason for the paper, aside from personal bent, is found in the following opinion: Manual training has won its way into many schools where its only claim can be general educational power—such are the manual training high schools and similar schools, under whatever name. Far more schools, in other points similar to these, have no shop work. The logical conclusion seems to be either that this training has no right in the former schools, or it ought to be also in the latter. Which is true can only be decided by determining the general educational value of the shop work. Now, the development of skill of hand and eye by the work will be denied by no one. If, then, we can show that it gives also an opportunity for thought growth, its claim to a place in the curriculum will be made good. We do not claim that shop work will infallibly produce thinkers—some so-called shop work is more likely to make blockheads; but so is some Latin, and some science, and some mathematics. We do not now speak of what shop work must inevitably do, nor even, great though that is, of what it is doing, but of what it may do; and I apprehend that the picture will be Utopian enough. But the educator, if any man, must "hitch his wagon to a star," and first he must see the star.

There is another instrument of education so much resembling the shop that a parallel between them cannot be out of place. I mean, of course, the laboratory; and in this would be included the field work of the geologist and naturalist. The laboratory has fought its battle and won its ground—the shop has its place largely yet to win. So much have these in common that no hard and fast line can be drawn between them. It is true that the general proximate aim in the laboratory is the discovery of physical facts, while that of the shop is the accomplishment of physical ends; yet, in all except professional and technical work, the ultimate aim of both shop and laboratory is the development of power in the student. Moreover, the mechanical and constructive side of laboratory work merges into the experimental and investigating side of shop work. The essence of both shop and laboratory is contact with things and learning at first hand; here they perfectly agree, and show themselves as parts of the "new

education," in the best sense of the word. Some specification of the common intellectual results of shop and laboratory may be in place.

I.

First, these methods of education employ, and cultivate, sense-perception, and all must agree that the great majority of our ideas are constructed of the material gained by sense-perception.

The boy peering into the test tube or crucible, or scrutinizing the swaying balance, and the boy laying the try-square to the board which he is planing, or watching when his iron shall be hot enough to strike, or feeling the decreasing effect of equivalent blows upon the cooling mass—these both differ from the book student, in that they gain ideas direct from things through sense; or we might better call these intellectual acquisitions, in the language of Locke, impressions, the marks or images made by the things upon the mind. Here, then, in shop and laboratory, the student is gaining new material wherewith to build his mind.

After perception, logically, comes conception. Concepts are either patch-work structures of misfit ideas suggested by words, or they are mental counterparts of the real thing which has acted upon the mind through eye, hand, ear, and other sense organs. The latter variety are born in the actual world, and in the shop and the laboratory, because these are parts of the actual world. Constructed in the presence of the object, they are in accord with reality, and have a fullness of detail never found in the patched-up conception; in other words, they are true; built of sense impressions, they are vivid and permanent; belonging to actual things, they are of practical value. When we remember that judgment and reasoning depend absolutely upon concepts, the great importance of concepts becomes evident.

Perception and conception, as a matter of fact, unite in a process which we call observation; a process which is, perhaps, the foundation of the difference between a man and a stone. Shop and laboratory develop this power, and test it. Words from a book may be repeated in parrot fashion, but the description in words of what has happened under the eyes proves the mental process.

Judgment and reasoning are based upon conception; as the character of the concept is improved, so the basis for good thinking is increased. Particularly is this true when the conception is made fuller and more in accord with the thing.

II.

There are, however, differences of great importance between shop and laboratory, and we must now note some of the peculiar characteristics of the shop work.

First comes the large activity of the student in all processes. The wood or iron is shaped and molded under his forceful hand—purpose, volition, effort, on his part, and, lo, the vainly resisting stuff is turned to his conception! The possibilities of thought crowd here beyond our enumeration—the perception of change, the conception of cause and effect, and the relation of equivalency or correspondence, the great ethical idea that to understand and obey nature is the only way to control her. Here, also, we are tempted to wander whither we must not go, into the field of moral ideas and the growth of character. Ideas which were mingled with action at their birth have the maximum of vividness and permanence. Such ideas, moreover, have more fullness; they grow in a kind of interchange of action and perception. Ductility and malleability cease to be mere words; they represent what they should, logically and etymologically, namely, an experience—an actual memory of a drawing-out, or a beating-out; with a hundred details, moreover, entirely lacking in the non-experimental conception. The conception formed is no longer that of the thing inert, but the thing changing in response to human effort; and how vitally important it is to know of things, not only what they are, but what they will do in response to a stimulus.

Secondly, the objects dealt with in the shop are close to everyday life. The laboratory seeks to penetrate the secrets and hidden places of matter and force; the shop deals with them on their face. The latter, no less than the former, deals with these two fundamental physical concepts—matter and force; not, indeed, in the dim regions where the line between force and matter seems to be fading away, the favorite ground of the physicist and chemist, nor when they enter into a mysterious compact to produce the phenomena of life and furnish the biologist's problem; but rather under the terms of raw material and labor meeting for the satisfaction of human wants, a problem in which lack of abstruseness and mystery is atoned for by tremendous ethical and economical interest.

There are in this connection four important concepts developed, to which I wish to devote some space; namely, the material, the implement, the process, and the finished product.

First, that of *material*—the stuff or “stock.” It would be possible, by tracing the material to its source, to introduce almost all the sciences of nature, especially, of course, botany and mineralogy. But the shop work is chiefly interested in the present condition; its texture, strength, forms, and the readiness with which it yields to the tool. Here may come the study of all the physical properties of matter—impenetrability, hardness, tenacity, brittleness, ductility, malleability. What an endless study is here of cohesion in all its forms and degrees! Friction and adhesion are no less exemplified whenever one material is to be attached to another.

All these qualities are to be studied, not abstractly, but with a view to the accomplishment of some practical end. The physicist asks: "What is the intimate structure and essence which underlies the forces of attraction and repulsion?" The mechanic asks: "Under what controllable conditions do these forces act and vary? In what quantity are they found, and how can I make use of them?"

Next comes the concept of the *implement*—itself material—not to be used as a component part of the final result, but to work its influence upon it. There may be noted three divisions here: First, that implement which comes in direct contact with the material, and which cuts, abrades, molds, perforates, grinds, polishes, and the like. This is the tool. It is a piece of matter found or formed by man to aid him in working his will on other matter. Its chief functions are the concentration, accumulation, or distribution of force. But often, to secure the best results from the tool, the material and the tool must be moved with respect to each other in a specially complex, or a specially forceful, or a specially delicate manner. Man then devises a combination of levers, wheels, cogs, bands, and the like, to secure the desired motion—this is a machine. It grasps material, or tool, or both. A complex motion is often gained by an interesting co-operation of man and machine: the machine furnishes one definite motion of tool or material, the man supplies the more varied adjustment of stuff or tool. A notable example is the turning lathe, with its ceaseless whirl ever in one simple circle, the gouge and chisel, which, in the workman's hand, carry the graceful curve from the mind to the work. Truly a noble conception! The dull matter of the machine has been, as it were, endowed with at least one thought, and has been taught to do at least part of the work of an intelligent being. This is the second form of the implement.

But the machine demands power in such quantity that its development has necessarily been contemporary with the growth of devices for utilizing the non-human forces of the world. These are chiefly the steam engine, and, in a less, but increasing, degree, the dynamo and motor. I know of no name for this third type of implement.

After the material, and the implement, comes the meeting of these two in the *process*—the hand driving home the nail, the vise tightening on the block within it, the chisel meeting the swiftly revolving bar of wood. What law of force is not illustrated here? Here are levers, inclined planes, rods, wheels, and all their combinations in action; here are velocity, inertia, friction, moments, reaction at every turn, generation, transmission, modification of force. Time fails us to do more than thus hint at what the shop can do along these lines. Force in the infinite, and in the infinitesimal, at lightning speed, and at an invisible snail's pace—yet equally sure and relentless! Here, surely, is a veritable laboratory

of statics and dynamics, with every law printed in clearly legible characters.

I can only touch upon the fourth great conception of the shop—the *manufactured article*. To the ordinary man it is a mere chattel, to be used and worn out; to the shop-trained mind it tells a story of human life, thought, effort, achievement; hardly an angle or a curve but speaks; every cross-bar and brace has a meaning; the oaken wainscot is again seen growing in the forest, and the great iron gates before the palace are known as the lineal descendants of pig iron, or even of the black rock in the bowels of the earth.

I might well have spoken of pure, logical products of tool work—causation and the geometry of space; but the above concepts seem to me the real contribution of the shop to the mental treasury. The danger of education in all ages seems to be the same—a tendency to become esoteric and far removed from daily life. Such was the learning of the school men of days gone by; there is not wanting a fear that modern scientific research, which entered as the herald of the new and practical learning, is erring in the same direction. Perhaps some of the fondness of the physicists for ether and atoms which have never been seen, and of the mathematicians for what are by definition “impossible quantities,” is no wiser than the love of the mediævalist for discussing how many angels can dance on the point of a needle.

A great body of educators call themselves humanists, and, surely, any man might gladly enroll himself with the true humanists; but, after all, are Plato and Virgil and Browning the humanities any more than the things which occupy the effort of a majority of civilized mankind and underlie the life and comfort of all?

DISCUSSION.

A. H. CHAMBERLAIN, Throop Polytechnic Institute, Pasadena, Cal.—The paper to which we have just listened certainly outlines the intellectual results of manual training in a most clear and forcible manner. It shows, as it ought, a high conception of the value of the workshop in the educational arena. In this discussion I can hardly do more than approve the stand taken, and perhaps add a few additional thoughts.

In the first place, however, one difference of opinion: To admit that manual training has a right to be in manual-training high schools and some other institutions is not, under the existing conditions, to admit its right to be in all schools similar to these in most points. Not all schools or communities are yet ready for it. Manual training, if poorly taught, will certainly fall into disrepute. The curriculum is now overfull, and if manual training is to stay and become part of the daily programme, its exponents must be men and women who thoroughly understand its value and are capable, not only of teaching their own subject, but of teaching the other subjects as well. They must see clearly the relations between manual training and the traditional lines of book work. Of such teachers there is still a comparatively small number.

The patch-work conceptions suggested by mere words and a tangible something, a correspondence to the real object, have been spoken of and compared. In no department of school work, so far as I know, as in the shops is the great value of the latter brought out, and nowhere else is there such opportunity for its growth. Such conceptions are in all respects true. A mistaken or wrong impression gained in the shop, and incorporated into, or made a part of, some piece of constructed hand work, can readily be detected and the defect shown the pupil, where, in some other line of work, it might pass unnoticed.

As to the comparisons made between shop and laboratory. The true shop is, in the broad sense, the true laboratory. In the true shop the student is not only to construct his model of wood, to make the joint, to temper or draw the piece of metal; but he must know why he goes through each process as he does, and understand the effects on the completed object, should some other method be employed. In the true shop the student must not only construct, he must execute as well. Along the line of mental results of manual training, let me read the answers to four of several questions sent out some time ago. These answers come from supervisors and teachers of manual training from all parts of the country—teachers of grades and high-school classes where manual training forms part of the regular programme; principals of manual and technical schools; normal-school and college men, and prominent educators, who, by observation and experience, are qualified to speak on the subject.

Of course, the answers are boiled down, some of the typical ones only being given, but covering, as they do, such a wide field of educational thought, they should certainly prove most valuable:

1. Can you trace any improvement in discipline, character, etc., to the manual training work?

"Improvement in manners, earnestness of thought, and promptness." "Decidedly." "Those who take manual training are superior, as a class, in both respects to those who do not." "Boys reputed bad settle down to a more sedate view of the school relation." "Promotes self-respect by opening new lines of power, and thus discipline is easier." "Stimulates to a sense of responsibility and a degree of well-founded self-respect, which are incompatible with the puerilities, conceits of the mere book students." "Yes, generally." "Best kind of moral training, if rightly directed." "Yes. Productive and creative activity in manual work furnishes pupils tangible proof that they are of some account in the world, and they are meant to control the universe by beneficent ends."

2. (a) Is the pupil's power to grasp and retain thought strengthened? (b) Is his power of application strengthened?

Unanimously "yes" to both. "Yes; power to grasp and apply thought in action is strengthened. Foresight, care, and perseverance are increased. Mere memory is but little exercised."

3. In what way do you see a manifestation that the mental machinery of the child is being improved?

"By increase of power to understand drawing, solve problems, and master difficulties. Thought is led into healthful lines. Proud to be able to do things in the home. Inventive power is strengthened." "In every way." "More logical reasoning; more exact; grasps abstract conceptions more readily. Laboratory experiments in science work are performed more intelligently and rapidly, accomplishing 25 per cent. more work." "Student is more logical, and consequently has a better verbal expression, manifested in the manner in which any line of mathematics or science is attacked." "In his general attitude toward his other lines of work, and his actually increased progress." "Learns to apply knowledge and to think concretely." "Develops judgment, perseverance, observation, accuracy, and application." "In love for manual work, in habits of

accuracy and neatness, in persistent effort for the accomplishment of a given aim." "For healthy physical, mental, and moral training, there is nothing better for the child from four to eleven years of age than continuous manual training, connected with the arts—modeling, painting, drawing, etc."

4. Do you think as much is accomplished in the book lines as if no time were given to manual training?

"Yes, more. The modern languages and music are taken up with more vigor." "A moderate amount of manual training work increases the amount of work done in the book line." "Time is unquestionably gained by increased powers of application and stimulation of interest. Pupils are less apt to waste time dawdling." "Theoretically, yes; but much depends upon the effective co-operation of the regular teacher." "The change of work invigorates the worker, and there is, therefore, no loss in accomplishment." "Yes, more." "Yes, if time is judiciously distributed between academic and industrial work." "Manual training, combined with the other arts, is the best possible means of training the constructive faculty or the constructive imagination of the child." "Pupils learn more readily from books, and retain what they have learned more tenaciously than their less fortunate fellow-students."

The intrinsic value of the article made in the manual training workshop is slight, but the energy working through the tool and manifesting itself in the finished object shows to the observant teacher characteristics of the boy never before known to exist in him. A finished piece of work is viewed with much satisfaction by the student. He sees the relation of cause to effect; his conceptions of form are increased, and he sees that only that is beautiful which is made for good and true purposes; that color, shape, and magnitude are, indeed, of a secondary consideration, when compared with the creative idea and execution of the object.

SOME POSSIBLE RELATIONS OF NORMAL SCHOOLS TO MANUAL TRAINING.

BY W. D. PARKER, STATE NORMAL SCHOOL, RIVER FALLS, WIS.

This paper contends that manual training has such intrinsic merit and has made for itself such actual place in a variety of schools as logically to demand the preparation of teachers for such schools by normal schools.

The normal school has sought to prepare persons for teaching whose qualifications in science and literature at the time of entrance were yet largely to be made. This proceeding has the disapproval of experienced teachers, and its like in the other professions has invited the earnest protest of lay and professional writers. While the conditions of sixty years ago showed immediate need for teachers at the hands of American normal schools, then first operated, normal management seemed to be justified in graduating persons of meager institutional preparation laid in method. Nearly the same length of time has been employed in teaching that management that the child is more than a mere reader, a calculator, and a writer, and that management is now invited to aid the child in expressing

a large body of truth that finds acceptance through his persistent wish to draw, to construct with his hands objects of beauty and of utility.

Normal management now finds difficulties in changing procedure, thus showing a historic conservatism that is well or ill according to its alertness to reform from within, or to its willingness to await compulsion from without.

Psychology itself has taken more vital forms of late years, and, through its applied pedagogy, normal management has learned the importance of studying anew the meaning of all manual effort that may be introduced into institutions; and it may be said that new stimulus therefrom has already come to many schools.

This industrial section of the National Educational Association has elicited and put on record ample outlines of manual courses of study, and has named the grades of schools that should practice in them. Its discussions have shown abundantly the belief of eminent men that the leading purpose of institutional manual work is the immediate reaction upon the moral and intellectual well-being of the operator, derived through attention and through manual habits that are created in childhood and maintained in youth.

Normal schools may be pleased to remain seminaries, though invited by lower schools to inaugurate pedagogic laboratories for observing, for enabling introspection to realize itself in the outer world. Booker Washington's account of his colony at Tuskegee tells the tale of social, as well as of economic, education. The wish to construct many forms, as a sequence of earlier tendency to analyze them by destroying them, may well lead to the view of John Fiske, as repeated by Dr. Butler, wherein the protracted period of plastic childhood is stated by Fiske to have afforded time for "converting our forefathers from brute creatures into human creatures." "It is babyhood that has made man what he is."

Whether or not Herbert Spencer's uniform answer to varied questions pleads for changes in the practice in normal schools, there can be no question of preserving the child's symmetry by employing the intelligent hand in verifying truths by the construction of objects and by delineation of forms.

Dr. Harris is pleased to say that "There are a number of branches of study, such as drawing, manual training, physical training, and the like, which ought to be taught in every well-regulated school." John Stuart Mill says: "The test of real and vigorous thinking is successful application to practice." Dr. Bain included under the title of "mechanical training" "the command of the bodily organs for all the ordinary purposes of life."

A brief example may suffice here for justifying the introduction of manual work in a school: It may be claimed that development through

the mind-hand is a tonic for performance in ordinary school study — not to say that manual and literary work are admissible during greater time than either when pursued alone. Dr. Belfield, of Chicago, has, during thirteen years, steadily maintained that young men make at least as rapid progress in the academic-manual course of study as they did formerly in the separate academic course of a breadth equivalent to the academic side of the academic-manual course, thus making a clear gain of the manual side of study and a certain other increment gained in buoyancy of spirit. Professor James, of Omaha, testified to like results in the city high school. Denial will scarcely be made of the sustained stimulus coming through the restful alternative offered chiefly by manual practice after work that is chiefly mental, when periodicity with proper integration is observed. Thus the concession of the effect of such combination in common schools logically carries like effect in normal schools in their effort to prepare teachers. Not the least value of manual training in any school is the tonicity of discovery by the introduction of the learner to the living practice of a large line of truths that relate to materials that have, heretofore, been unknown to school practice. When schools perform, under the titles of zoölogy, geology, and psychology, relevance to the mechanics of anatomic and botanic structure will be provided through the mechanism of manual training; and allusion to the external in known terms of the manual will make psychology find its constant corrective in the object. The normal school that teaches in typical forms in any set academic branches, making it the pleasure of learners to discover illustrative relevancy of the emphasized type, will thus save time which may be used for manual training, as in botany and zoölogy the consideration of functions leads to noble suggestions in the name of classification — just as the doctrine of the kindergarten gifts leads to wide relevance of gift forms everywhere; just as “man intuitively feels that his unrealized self lies in the objective world, that there is a community of life between himself and that world,” in phrase of Professor Arnold Tompkins. Hence, if objection is made to further inclusion in normal or other curricula, the aggregate in such courses may be made constant by teaching in types and by omitting multitudes of extensions by name, under the belief that concentration in a few branches for a few lines is admissible whenever the spirit of teaching accommodates to the learner's present status.

Nearly all normal schools have introduced drawing, with permitted differentiation of free-hand and mechanical, between the sexes; it is believed that as readily can construction through tool work in wood and paper for all pupils — culinary and needle work for girls, metal and general engine construction for boys — be introduced.

An encouraging sign for manual work is found in Wisconsin, in the

statute, passed in 1895, that provides for the establishment of manual training departments in high schools, for supervision, and for qualifying teachers therein, and for furnishing two hundred and fifty dollars' aid to each school, though not to exceed ten schools in the state may be so aided in any year. Five schools are already operating under this law, and with satisfaction to local people. The history of this movement will interest at another time, but it may be remarked now that this demand for teachers must, in part, rest upon normal schools.

The range of desired manual training is revealed by a glance at the prospective use of the hand in civilization. The art which every sane person should acquire is shown in his necessary touch with personal belongings, with food, clothing, domestic furniture, and other common objects; and such touch ought to attract attention of school children. This minimum enlarges itself greatly when the persons are to act and think in community. Their language is heightened in power, both in receiving and interpreting truths, by the use of delineation in varied forms, by writing, by cutting with several tools, and by joining for constructive purposes in paper, wood, fabrics, and metals; and by cooking, sewing, and draping.

From kindergarten through twelfth grade appropriate manual instruction should be the pleasure of every child in his own interest, in order to make him a more intelligently co-operative citizen, though permitting him to do what he wants to do to his betterment. If schools purpose having pupils find the unknown through its discoverable relevance to the known, even admitting Dr. Payne's placement of the unknown within, and the known without; if the belief is tenable that self-activity alone makes individual progress possible; if the purpose of education "is to carry us to a knowledge of ourselves in the work," as named by Matthew Arnold, then manual training will be included in any worthy system of schools; for manual skill of any kind may be heightened by institutional effort. Hence the normal schools must fit teachers to deal with manual work, since their graduates are to organize courses of study, are to execute work thereunder, and are to be expositors of plans therein, for the information of school officers and of the general public.

"Hail to the skillful, cunning hand;
Hail to the cultured mind!
Contending for the world's command,
Here let them be combined."

DISCUSSION.

HOMER H. SEERLEY, Cedar Falls, Ia.—The day has passed when argument is necessary to establish the importance of manual training as a part of an elementary education.

The day is even here when the means and methods of its introduction are leading questions for discussion and solution. The people of the United States are ready to do anything that is rationally possible to accomplish the bettering of the chances for prosperity and success for their children through public education. They are dissatisfied with present results, and are waiting patiently and hopefully for the thinker who can solve the problem and show them how to make elementary education more effective and more practical. That there is need of training in industry for every child who is born into this progressive civilization is an accepted fact, but the way to secure this desired end is not yet solved. There is no doubt but the country boy, with his industrial training obtained on the farm, even when short in intellectual education through inefficient and badly conducted rural schools, has more chance in the struggle for success in life than the city boy with no industrial training, even though he attended the best public schools and have the best chances the age affords for intellectual education. One needs but to investigate the record of successful men to learn that training in some industry is an essential factor to an individual's success in any of the present-day vocations. The city boy has an environment that is naturally against a training in any form of industry, unless there is some co-operative effort like the public-school organization to give it to him. To learn to work, to acquire the disposition to be industrious, to get such a training as to make one ready to do and efficient in doing, ought to be the privilege of every child that comes in contact with public education.

I am led to believe, therefore, that rural schools, with all their deficiencies, are not depriving the children they serve of this sort of training to the extent that city schools do. There is no doubt but the rural schools could be so modified in the courses of study they offer and in the character of instruction they give that they could better serve the children that they are organized to teach. There is necessity for the rural school-teacher more clearly to understand the industries of the farm, and to unite more closely to the regular studies the life of the country, but it is also much more true that the education of the cities and towns should be thus combined with the industrial life that the children in the schools of these cities and towns must afterward live. This much from the economic side of the problem.

But there is another side to the problem, that of training and discipline, both of which are obtainable through such modification. Learning to work with economy of expenditure and effort, learning to work skillfully and rapidly, is a great training in mental discipline and mental activity, and in no way can this particular kind of skill and economic development be given except through exercise in manual industry.

But our problem today is not so much these as the relation of normal schools to the public schools in the aiding of the solution of the question of proper teacher supply—furnishing such persons as are able actively to lead in this work in all schools. There is no doubt, if there is no state agency in the training of teachers to teach manual industry, that the progress in these desirable lines will be very slow. These state normal schools have a province in public progress and development that must not be overlooked, and they must be enlisted in this work and be thoroughly in sympathy with it before much can be done to hasten the day when a complete education for a child is obtainable in a public school. Normal-school students go at once to the work of teaching in public schools, and, if they were taught in these lines themselves, they could become an immediate factor in developing and popularizing the work. The states could give great aid to this industrial training by at once opening a manual training department in each normal school, and by offering two lines of instruction: first, a course in general training suitable for all grades and kinds of schools, which would constitute a part of the course that every student graduating from a normal school should be required to take; and, second, a course that was intended to prepare persons to do special work as instructors in cities and towns

where such instruction is put into the hands of a special teacher. There is a danger that, if the advocates of this work as a part of public school educational effort stop long enough to settle the forms that are essential and best, there will be several generations of children neglected and ignored that could have been at least partially trained if some form had been zealously undertaken. There must be more or less experiment in these new attempts. There will be much difference of opinion and much variation in the plans undertaken. There should be, however, serious efforts in every field, whether or not these attempts are more than approximations toward a desired end. These experiments can be made at the normal schools more cheaply and universally than anywhere else, and can be thoroughly tested there with actual children in every grade of public-school work, so that, before long, some of the normal schools will certainly develop a system of training that will be known to be possible to be accomplished, and that will show such evident results that it will be acceptable to the general public. There is no question but the advocates and the instructors in present-day manual training will be somewhat disappointed at these preliminary efforts of the normal schools, as these schools will not go to the full measure of instruction that the majority of these workers now think essential and important; but they can be satisfied of one thing, that the normal schools will occupy the middle, conservative ground in the effort, and will be able finally to accomplish the purpose of their attempts through securing some actual training in industry for the pupils in the public schools. All things are of slow growth, if they continue long. All things are of slow development that are to be of lasting benefit, and, for this reason, a moderate and a continual progress toward an ideal condition, an approximation toward an ideal state of education and training, is all that should be sought. To the securing of this very much desired state of affairs there can be no more useful, nor more effective, agency than the state normal schools, and their full duty to public education will not be met until they are aggressive factors in the further development and complete application of industrial training.

DEPARTMENT OF ART EDUCATION.

SECRETARY'S MINUTES.

FIRST SESSION.—WEDNESDAY, JULY 7, 1897.

The department was called to order by the President, Mark Maycock, of Buffalo, N. Y., who opened the meeting with a few well-chosen remarks.

Miss Harriet Cecil Magee, of Oshkosh, Wis., read a paper, "Drawing in Normal Schools—Problems Solved and Unsolved."

D. R. Augsburg, of Salt Lake City, Utah, delivered an illustrated address on the "Expression of Lines."

The following Committee on Nominations was appointed :

Miss Mary Thompson, Miss Florence Hines, Miss Skinner, Miss Hattie White, and Miss Stratford

SECOND SESSION.—THURSDAY, JULY 8.

The department was called to order by the President at 3 P. M.

Jesse H. Brown, of Indianapolis, Ind., gave an address on "Principles of Drawing for Illustrations."

Miss Lillie M. Godden, of Chicago, Ill., read a paper on "What Do People Want in the Way of Drawing?" The paper was illustrated with blackboard sketches.

The Committee on Nominations reported as follows :

For *President*, Miss Harriet Cecil Magee, Oshkosh, Wis.

For *Vice-President*, D. R. Augsburg, Salt Lake City, Utah.

For *Secretary*, Miss Florence Browning Himes, Albany, N. Y.

The report was adopted, and the nominees declared unanimously elected as officers for the ensuing year.

After passing a vote of thanks to the local committee for its many courtesies, the department adjourned.

D. R. AUGSBURG,
Secretary.

PAPERS AND DISCUSSIONS.

OPENING REMARKS.

BY MARK M. MAYCOCK, PRESIDENT OF ART DEPARTMENT.

There are two features of elementary art that have not yet received the attention they merit. One of these is the systematic use of drawing

as an aid in teaching other subjects, and the other is the value of certain lines, forms, and colors as aids in expressing feelings and emotions.

Rightly to use art as an interpreter, it must tell its story in a simple way, it must not lose force by unduly emphasizing many things, and it must be clear in the one thing it is expected to say, and truthful in its statement. Further, it should be without effort at artistic finish or labored execution.

Illustrative drawing may be given a much broader scope than is now accorded it; this is particularly true of geographical drawing, which is now confined almost exclusively to maps, but which may profitably be extended to most of the common descriptive features of geography.

In nature study, including the study of insects, and in the higher subjects, nearly every branch offers opportunities for impressing special features by the aid of drawing.

In the realm of decorative art we have made less advancement than in either pictorial or geometrical drawing, and it is for that reason that I wish to call attention to the positional and associational value of lines and forms as elements of decorative and pictorial composition.

By decoration we understand not merely a change, but an improvement, in the appearance of an object. It is not simply covering one piece of hideousness with another that is possibly still worse, or merely changing it in form, color, or texture. Neither does it mean the promiscuous combination of beautiful elements for the purpose of enrichment; but true decoration means, rather, a thought or mood given form, in order to produce a similar thought or mood in others.

The language of decoration and its influence are learned from the expression of lines, forms, and colors, as derived from the fact that certain causes produce certain effects, and, where one is, the other will usually be found.

A straight line conveys the impression of permanence and stability; it is the leading line in all primitive structures built for protection and convenience, and, on account of its comparative ease of adjustment of rectilinear parts, it is the prominent line in the architecture of all nations lacking in mental and physical activity; it is also the line in nature of objects or parts requiring longitudinal resistance, such as the trunks of trees, stems of plants, and many of the bones. When in an upright position and with suitable width, the straight line gives the impression of support and security. Thus trees that endure the most are those that are straight and upright. From daily contact with this principle we have learned that straight upright lines express strength and stability, and the decorator who wishes to convey this expression in his work relies on this principle, and gives the effect of stability by the generous use of substantial upright lines.

The expression of horizontal lines is that of quietness and rest, if too numerous, producing sluggishness ; they are the lines in nature that seem to have no end ; the position is that of rest or decay. The prevalence of these lines in the sunsets, moonlight views, prairies, and fields gives them their well-known peaceful effect.

While the horizontal line expresses peace, rest, or decay, roundness is the expression of quiet life. It is nature in her satisfied mood, without an excess of life and without much motion.

These are not the forms either in the animal or vegetable kingdom that reach out into exposed places ; but they prefer rather to be of the many than to stand alone.

There is also a class of objects that at once convey the thought of spirit and motion, forms that have life and activity in every line. These are the angular forms in nature, and the more acute their angles are, the more life and motion are expressed. Birds that are noted for swiftness of flight, animals of activity, and boats constructed for speed, all possess this feature in a marked degree.

A slanting line leads the eye in its own direction, and a row of slanting parallel lines will carry the eye in the direction of their slant. If these slanting lines be opposed by lines of similar slant, the eye, in attempting to follow both directions, will be carried toward the meeting point of these lines.

Not only have form and direction an expression, but size is also to be considered, for there is size of grandeur, size of stability, size of activity, and size of insignificance, all of which are active elements in giving expression to constructive design and decorative enrichment.

As no style of decoration has existed without color, and as color aids so much in giving expression to decoration, it becomes an important element in the expression of ornament.

Experience has taught us that colors are warm or cold, advancing or retreating, soothing or exciting, and cheerful or gloomy, and rightly to use colors decoratively it is necessary to know their expression and value. We must know the effect, also, that one color has upon another, and the hues, tones, and quantities that will best harmonize.

More than is necessary is said about the refining influences of art, and not enough about its underlying principles. Not that I object to refinement, or doubt that art is refining in its influences any more than I doubt that science or literature are refining, but the need of elementary art work just now is not refinement or taste so much as a knowledge of the æsthetic value of the competent elements of art.

For if every line has an expression of its own, and every position of a line conveys a thought peculiar to itself, and every form is the germ of an idea, then elementary art is a science which must be viewed from its

psychological and scientific sides, as well as from its æsthetic standpoint. But beyond its educational value and its æsthetic worth, the crucial test of the value of our work is its effect upon the minds of our pupils. If the impression our work produces is frivolous and enfeebling in its tendency, our effort is wanting in its vital element, but if it is wholesome and uplifting, then it must be good, and we are in some measure meeting the demands of the better side of education.

DRAWING IN NORMAL SCHOOLS—PROBLEMS SOLVED AND UNSOLVED.

BY MISS HARRIET CECIL MAGEE, OSHKOSH, WIS.

G. F. Watts, who has been the interpreter of more spiritual beauty than perhaps any other living English artist, says in the catalogue of his last exhibit in the New Gallery, London, that the object of much of his work has been "to suggest in the language of art modern thought in things ethical and spiritual."

Is not this in a humble manner the object of art training in our normal schools today? Is it not to suggest in the language of schoolroom art "modern thought in things ethical and spiritual"?

The new education is most surely ethical and spiritual; and it is the spiritual that must mold and inspire the spiritual in all our educational work. In art we call this motive power by different terms—feeling, thought, inspiration; and unless the material expression reveal something of this, we say that the results are dead, dry, and inartistic.

How shall the students in our normal schools be imbued with this spiritual quality, is a problem that confronts us today. It is a problem that each of us has met on the threshold of our teaching. It is one we still wrestle with after years of experience; and it is one that we must leave at the last unsolved, unless we find the solution in our own soul. No one can solve it for us. It must be wrought out in the smelting furnace of our own individuality, and imparted by means of our own personality. You must do it in your way. I must do it in mine. We cannot do it in the same way. It is wrong for us to think even for a moment that we can do so by any set plan or method.

To use the words of Longfellow, put into the mouth of Michael Angelo,

It is the gift of God, and must be used
Unto His Glory;

or, as Robert Browning said of music,

The finger of God, a flash of the will that can,
Existent behind all laws : that made them, and, lo, they are !
And I know not if, save in this, such gift be allowed to man.

The pictorial element in schoolroom art is another unsolved problem. We are, too many of us, slaves to the real. We have not yet reached that point in life called by Philip Gilbert Hamerton "emancipation from reality."

As a rule, educators are not considered artists; though some may admit that the greatest educators have had the artistic impulse to a greater degree than the least. If we consider these two classes, I think we shall find that the artist is an educator, and the educator is an artist in the highest and broadest sense. For an artist is an interpreter, a revealer of abstract beauty by concrete examples. What other is the educator? What were the elements of greatness in the teaching of the greatest teacher, Jesus of Nazareth, who "taught as never man taught"?

1. He taught spiritual abstraction by concrete methods. The lilies and the sparrow, the grain by the wayside, and the tares in the meadow furnished him teaching material.

2. He was the great interpreter, for he understood both the language of humanity and the language of divinity.

Every true teacher is an interpreter. Every true artist is such, also. But to impart this power of interpretation, to teach this subtle language so that those taught shall become like interpreters, was given in full measure to Jesus Christ, and to him only. Yet to do some little part of such a mighty work is the commission of everyone who enters the classroom of a normal school and stands in the sacred office of a teacher of teachers.

One may have that artistic insight that enables him to see in nature and commonplace objects about him a beauty hidden to vulgar eyes; and he may be possessed of sufficient technical training to express what he feels and sees in a graceful and skillful manner; but no amount of mere technique will ever give to normal students the power to interpret to the minds of children the truth and beauty of the things about them.

Children are too imaginative to have an accurate memory, and the teacher who makes much of technique deals too much with memory and not enough with imagination. Our normal students must be "emancipated from reality," and trained in imaginative memory. For it is upon the control and education of imagination and memory that the artistic powers largely depend for their highest and best development. Several years ago, in Paris, some interesting experiments were made along this line by M. Lecocq Boisbaudran. His experiments were undertaken for the purpose of ascertaining how far the artistic memory may be cultivated. His account of these experiments astonished the most experienced artists

What may have been done in this direction here in America I do not know, but I am convinced that the training of the artistic memory has not been wholly neglected in our schools. Yet I do fear that in our normal schools not enough attention has been given to the training of imagination and memory, the two working in unison.

When I began my teaching in the West, I was impressed with the sluggish manner in which the imagination of the normal students worked. But after a time I found that, while it may be true that the imagination depends much upon the environment, that young men and women reared in a level, inland country have less vivid imagination than those reared on the seacoast or among the mountains; yet the arousing of the imagination of the student, be it much or little, depends largely upon the teacher.

That teacher, to be successful, must possess in himself the power to awaken and inspire images otherwise unformed, and so to open the mind's eye and turn its gaze upon things hitherto unknown.

How imaginative memory may be cultivated is a fitting question. So much has been made of object drawing from geometric solids and common and familiar objects that one may justly ask: Does such work control and cultivate imagination and memory? We would answer that in our judgment, deduced from experience, it does do this to a certain extent, but not altogether. In fact, one has said and said truly that "When we keep children drawing from objects, learning always to reproduce what they see before them, are we not virtually exalting means to an end? Are we not giving them a graphical vocabulary, without encouraging them to say anything with it? While to encourage a child to use his graphical vocabulary, attained through drawing from objects, to express his artistic conceptions, is to lead him into the world of art and to relate him to it."

Objects having three dimensions must be drawn so as to suggest the third dimension and cause the mind to image the part not visible. But are we not in danger of calling upon our students to study only the part seen, and to dwell upon the facts of appearance until they represent them as baldly as they do the facts of form in constructive drawing? Thus they are educated away from artistic feeling and representation, and the imaginative memory is not roused or cultivated.

Subjective drawing is better for young children than objective. It is true that there are minds to which the subjective always makes a stronger appeal than the objective. This, however, is not perhaps general with adults, and object drawing must be given to such persons at the beginning of their work and continued till they recognize what they see. Later they come into the subjective work, having, as it were, learned back to child sight. In the case of children much imaginative drawing should be given before and in connection with object drawing. But the adult

who comes into the school untaught must be taught, first, to draw from objects until he has, to a certain degree at least, mastered the alphabet of form language. When in possession of this, he may be set free to express his own thought by means of the new language. But one who dwells upon technical drill for its own sake is like a writing master as compared with the inspirational language teacher. The material results are conventional and not according to nature. If the convention is dwelt upon in this way for its own sake, the life is not represented.

To bring the mind close to nature is most essential in this department of work.

"'Tis life of which our souls are scant,
More life and fuller than we want."

It is form and movement that must be expressed in a bold, spirited manner. It is not the quality of the line used for this expression upon which the soul of the student must exercise itself so unceasingly. "I think our lines are better than yours," said a student of one school to another. He did not say that the line was more expressive of form and movement. Poor young man, he did not get beyond the mere fact of the line. His educational horizon in art was evidently not much broader than the line in which he modestly rejoiced.

With children this is especially necessary, and normal-trained teachers must be taught that the objects to be presented to the little child must be brought directly from life, the life of the child. A loving interest is at once excited, which will express itself in line and outline, giving to the crudest work

"That touch of nature that makes the whole world kin."

Read to children poems and stories of the known, not wholly of the unknown, something at least that touches upon his limited experience. It is absurd to attempt to teach empirically from facts that have never entered the experience. Read to a little child such a descriptive poem as the "Old Oaken Bucket," and you will probably secure as illustrations of mental images a series of such drawings as those described by Mrs. Lucy Fitch Perkins in her paper on "Imagination and Drawing." The drawings referred to consisted of three circles and a number of spots dotted about on the paper. When asked what these were, the child replied that the first circle was the "old oaken bucket," the second "the iron-bound bucket," the third circle "the moss-covered bucket," and the dots "the loved spots that my infancy knew."

For the cultivation of imaginative memory by means of drawing and the kindred representative arts the teacher must go from the known to the unknown. He must so teach that glowing mental images shall be formed. If such concepts are formed, they will find fitting expression, for

"No beauty, nor good, nor power
Whose voice has gone forth, but each survives
For the melodist,
When eternity affirms the conception
Of an hour."

There are other problems in drawing in normal schools that call for consideration; for example, mechanical drawing, color, composition, sketching from life, and a broader and more thorough study of the history of art. Whether in our short course of thirty or forty weeks, of three and one-half hours per week, we should attempt to cover more than the work of the eight grades, and omit the high-school work entirely, is a question of importance.

When the normal school is situated so that the majority of its students have had years of training in drawing before they enter the normal school, then advance work may be carried on with assurance of success, the elements having been mastered. But when only an occasional student in even our large high-school contingent has received the slightest instruction in drawing before entering the normal school, the problem assumes a different aspect and must be solved in a different manner.

Then it seems to us that the most we can do is to teach our students the

RECOGNITION OF ESSENTIALS.

In the "Florentine Painters of the Renaissance," by Benard Berenson, the author makes a statement regarding painting that is equally true of any pictorial representation, no matter what the medium. He says that, "Setting aside those elements in painting which it has in common with literature, that is to say, all the elements of association and sentiment, the suggestions of pleasant scenes, attractive types, and the emotional states induced by these; setting aside all, in fine, that we call poetic in a picture as not being *specific* elements of enjoyment capable of being afforded by painting, and by nothing else, the art of painting is differentiated from all other arts by the fact that on a surface of two dimensions it represents objects that have three, and it represents movement by means of objects actually motionless."

But how do we realize form and movement? Every physiologist and every teacher of young children knows that the realization of form comes through touch, and that, too, through active touch or the muscular sense. Exercises in handling and grasping are given to young children in order that the correct idea of form may be developed in the child's mind. Work in clay modeling and the manipulation of other plastic materials are carried on for the purpose of completing form ideas. The thought, then, that one can enjoy pictures by touch, by the muscular sense, "sounds," as one has said, "as comic as to say that our enjoyment

of music comes to us through the sense of smell." Nevertheless, if we consider the working of the imagination in the senses, we shall readily see that, although "crude finger tips are not in question, the sense of touch does lie at the bottom of the matter." We know that it is largely by means of touch that we learn to appreciate distance, solidity, and motion; and paintings, whose peculiar task it is to represent objects of three dimensions upon a surface that has only two, must, therefore, call the sense of touch to its aid; and "those pictures which succeed in arousing the imagination of touch are the only ones which solve the problems peculiar to their art, and are, consequently, the pictures which we must regard as great art."

The work of the Florentine artists, from Giotto to Michael Angelo, was almost exclusively devoted to the human figure in repose or movement, and Mr. Berenson would have us think that this accounts for the hold the art of this school has upon us. The artists of this period devoted themselves to the rendering of form and movement, "the specific task of the art of painting."

In the representation of form and movement the artist must represent them in such a way that we shall realize them more readily than we do in actuality. This is why

"We love

First when we see them painted, things we have passed
Perhaps a hundred times nor cared to see."

To illustrate this fact to a class of students a few months ago, I placed upon a stand a group of objects represented in a water-color drawing on the wall. I asked the class which afforded them the greater enjoyment, the reality or the representation. They answered that it was the representation. They realized that the form was represented in the picture in such a manner as to rouse their imagination of touch and to "stimulate to an unwonted activity psychical processes never tending to pass over into pain." Drawing must, therefore, select or invent those surfaces and those articulations "which shall startle our ideated sense of touch and muscular tension into unwonted activity," for from such ideated sensations most of our pleasures arise; and the chief problem of drawing in normal schools will be solved when our normal students find themselves in the possession of the ability so to represent form and movement that those that look upon the representation shall have this ideated sense of touch roused and stimulated into unwonted activity.

Then shall the art of our public schools afford pleasures that are exhilarating and life-giving. Then shall drawing fall properly under the category of art which "enriches life and re-enforces personality," confirming our hold upon those vital principles that strengthen and develop selfhood to its fullest and freest activity.

THE EXPRESSION OF LINES.

BY D. R. AUGSBURG, SUPERVISOR OF DRAWING, SALT LAKE CITY, UTAH.

Expression is the language of spirit expressed through form. Everything has expression which gives rise to some thought or feeling. Because the limbs and leaves of a certain tree droop we call it the weeping willow. The somber color and peculiar moaning of the pine trees give an expression of sadness and a feeling of lonesomeness. The oak tree expresses sturdiness, the hickory tree is tough, the elm is graceful, and the maple cheerful. Thus each tree, as well as each shrub and plant, has an expression peculiar to itself.

Animals have expressions, which we speak of almost unconsciously: greedy as a pig, stubborn as a mule, gentle as a dove, strong as a horse, fleet as a deer, the patient ox, the ferocious tiger, the active cat—are all expressions which characterize these animals. And to prove how true these expressions are, exchange one for the other and speak of the gentle pig, the ferocious dove, the active ox, the stubborn cat, the gentle tiger, and we see at once how unfitting the expressions become.

If we were walking through a forest and should suddenly come upon a snake, instantly there would be a feeling of revulsion. Why is this so? A snake is really both beautiful and graceful, its every movement is the perfection of grace, and its color is beyond criticism; yet to all of us it is repulsive in the extreme. Why is this? Simply because the snake gives expression to that which is disagreeable to us, to that which is sneaking, creeping, crawling, crafty, and treacherous. We have no such a feeling when we see a bird.

I know it is impossible to separate the so-called expression of form from the expression of spirit, or to make an analysis of either. It cannot be done, nor is it desirable that it should be. Our aim is merely to choose some of the most familiar form elements and to illustrate, not all, but some of their leading expressions.

Let us begin with lines. Lines are divided into three general classes—the straight, the curved, and the angular.

There are three kinds of straight lines—the vertical, the horizontal, and the oblique; each having an expression widely differing from that of the others.

The vertical line expresses strength, life, stillness; the horizontal line expresses weakness, death, repose; the oblique line expresses action.

When a line is said to express a certain quality, it is not implied that

it expresses that quality exclusively, or that it will express it under all conditions. Other lines and combinations of lines may express the same quality, but in a less degree.

THE VERTICAL LINE.

The vertical line is pre-eminently the line of strength. It suggests strength. The strong are vertical, upright. I have heard people say that they would not dare to ascend the leaning tower of Pisa, thus unconsciously condemning the oblique structure as appearing weak.

THE HORIZONTAL LINE.

The horizontal line is the line of weakness. It is the weakness of this line that limits the powers of man to throw a bridge across Lake Michigan. He cannot erect vertical, that is, strength lines high enough, nor get material strong enough, to support the weakness of such a long horizontal line as this span would make.

The vertical line, being the line of strength, suggests life. Life is the vital element of strength and has made the vertical line possible. I almost dare say that there can be no vertical line without the aid of life. The vertical is the natural position of life. Plants grow upward. The word growth implies a vertical direction. On the contrary, the horizontal line, the line of weakness, suggests death. A landscape composed of horizontal lines is a desert. A forest of trees is expressive of life. Let some mighty tornado sweep through it and level it to the ground, and it expresses death and desolation.

THE OBLIQUE LINE.

The oblique line is the line of action; it may express other qualities, but first of all it expresses action. The vertical line of stillness and the horizontal line of repose are connected by the oblique line of action.

THE CURVED LINE.

The curved line is the line of grace and beauty. This is the most pleasing of lines, and is to the beautiful what the vertical line is to strength. There is scarcely a piece of decoration that does not contain it in some form or other. All of the lavish foliation derived from the celebrated acanthus leaf is in like manner modifications of the single and double curve.

In nature the curve is the predominating line; it is met with in endless profusion and in the most subtle combinations. It abounds in all kinds of plant growth, in leaves, buds, flowers, fruits; in trees, shrubs, and plants; in fact, it is the most abundant line met with. The graceful

movements of animals, especially wild animals, are in curves. Did you ever watch the flight of a large bird as it sails through the air? What long beautiful curves, both single and double, mark its flight!

THE ANGULAR LINE.

The opposite of the curved line is the angular line. The angular line is the awkward line, the line of confusion and disorder. Broken things are angular. Place such antonyms as the following together:

Plenty	-	-	-	-	-	Poverty
Fatness	-	-	-	-	-	Leanness
Smoothness	-	-	-	-	-	Roughness
Pleasure	-	-	-	-	-	Pain
Gentleness	-	-	-	-	-	Harshness
Gracefulness	-	-	-	-	-	Awkwardness

and it will be found that the curved line is necessary to represent the first row and the angular line the second.

PARALLEL LINES.

Parallel lines express order. They are the lines of order, monotony, and formality. When we put the room to order, we make the lines parallel. An orderly arrangement of lumber, logs, and wood is when they are arranged in piles, the pieces parallel to each other. Trees arranged in rows express order. The angular line is the line of disorder. When we comb our hair in the morning, we make the lines of disorder parallel, and order is at once established. It is the angular lines about the house and yard that create disorder.

There are three forms of lines that seem to mark the hand work of man wherever he is found. They are the circle, the right angle, and parallel lines. These lines are not found in nature to any great extent, and, even when they are found, they seem more the result of accident than design; but wherever man is found, they may be seen on every hand. Streets are parallel and at right angles to each other. The pavements are the same. The angles of buildings are right angles; the lines of the doors and windows are parallel; the arches are segments of a circle; the trees are planted in rows; in fact, wherever the eyes are directed, parallel lines, right angles, and circles are seen, lines that can be made in only one way and by one unalterable rule. Now, go to nature, where man's handiwork is not seen; here are no straight paths, no rows of trees, no perfect circles, few parallel lines, few right angles; but in their place are the curved lines, the obtuse and acute angles, each capable of infinite variety and combination, obeying laws so subtle as to puzzle the acutest mind.

PROPORTION.

Now, last of all we have proportion, possibly the most important element of all. The vertical line may express strength, the curved line grace and beauty, but only when they obey that indefinite law of proportion without which strength becomes cumbersome and beauty vanishes as if by magic. A form may be composed of the most beautiful lines, and made with the highest skill, but if it does not contain a right proportion, it is weak and unsatisfactory.

We have tried by these simple illustrations to show the expression of some of the most common form elements, not so much with a view to their analysis as to lead the mind to see that these elements have expression in themselves distinct from the form of which they are a part. A knowledge of these elements may lead to higher thought and a clearer understanding of the mightier attributes of spirit in its myriad manifestations through matter.

*WHAT DO THE PEOPLE WANT IN DRAWING IN THE
PUBLIC SCHOOLS?*

BY MISS LILLIE M. GODDEN, CHICAGO, ILL.

What do people want from drawing in the public schools? There are some who insist that the public school shall primarily fit for one's calling; it shall send out pupils ready to succeed as workmen or as money getters. Industry in all its departments expects the public schools to fit for its demands. How seldom now do we hear of apprentices! Qualified tradesmen are expected. The expositions of the last fifteen or twenty years say: "Improve the finish of your goods, add æsthetic ornament to useful goods and wares." Dr. Wm. T. Harris says: "The true general industrial education for us and all commercial peoples is the study of drawing, not of the mechanical or machine sort, but of the sort that reproduces analytically and synthetically the historical forms of the beautiful." This is good for all children, for all people; laborers in the mechanical arts, in the textile arts, in the trades, in the professions, in the home, and on the farm. Never before have the children of the United States had such fine opportunities; never have they lived in such a paradise as at present, or in such training schools as are now seen in the East, West, North, and South. Even district schools are taking up this subject of drawing. It is true the time was when it was almost a crime for a child to draw in school, but at that time it was thought necessary to cramp a child's activities, to ride roughshod over his sensibilities, or to lash him like a brute in

order to round out men and women. Now we try to study the child, to nurture and cultivate in all kindliness every faculty.

In the practical work of the school there is a perpetual tendency to lose sight of the essential matter of drawing, which is the cultivation of taste, and to drift into drawing for the sake of mechanical construction.

Drawing in our public schools should be educational. It should be practical. It must stimulate the mind to self-activity and cultivate the powers of perception, conception, memory, imagination, and judgment. It must, as far as possible, enlist the intellect and the feelings, the head and the heart. It must be considered as a means of expressing thoughts, feelings, and desires. As some one has said: "The trinity in practical art is the mind, the eye, and the hand; the eye to perceive, the mind to conceive, and the hand to execute or express." In short, drawing means mind training, eye training, and hand training. That which the mind's eye can see clearly the hand can be taught to place or picture. Parents and teachers often cultivate false notions of education for the average child. He is led to set up false ideas and worship them, and expect the upper seat in the synagogue of education. To such, to be good in drawing means to be an artist or nothing. We do not mean to produce artists. Drawing means infinitely more than this. Drawing in our public schools should be another means of expression. It should mean a language, a universal language. It unites, and it is intelligible to all nations. The hieroglyphics of the Egyptians picture to us a life of a people of four thousand years ago. Are not those drawings to us a language? Yes, a language older than script. Who can belittle it and call it only picture work?

Drawing, if properly taught, is a means of expressing thought, not a mere accomplishment for the amusement of persons of leisure. I do not believe in placing drawing in public schools, using public money, simply that pupils may be taught to make a few pictures for the beauty of them and call it art work. Art—drawing I prefer to call it—is for us all. The work done in our public schools, artistically speaking, is of little value, but from an educational point of view it is invaluable.

How many pupils in our public schools are apt to become artists or geniuses? We must not look for or expect to find such genius with such talent or energy as the boy West had. His genius impelled to rob the cat of her tail for bristles to make his brushes. True, we do find them, but in our public-school drawing we want to lead out the little of the Benjamin West there is in all pupils. Every child has an æsthetic side, to be developed or withered. Drawing develops the æsthetic nature. Ruskin says: "It is better and more important a thing for young pupils and unprofessional students to know how to appreciate the art of others than to gain much power in the art themselves."

Again I say we do not place drawing in public schools that our pupils may become artists. Language is not taught with the idea that pupils may become poets or orators. The work in drawing must be based on the ground that it is educational, that it is practical. We must look at the utilitarian side. Drawing does not stand alone. It should be, and is, a part of every other branch. All instruction in public schools should be general, not special; broad, not narrow. Our aim is to make the best being possible out of every pupil, to broaden and strengthen him along all lines. The question should not be only what use can be made of this drawing, but rather what power will it bring to us in the mastery of life's problems. How often have I heard teachers say: "I can't draw; there is nothing of the artist in me. Why, I can't draw even a straight line." Anyone who has a normal brain, a hand, and an eye may be taught to draw. Now, don't misunderstand me; I don't mean that all may become skilled artists, but simply that all may be taught to draw. If the mind and the eye can detect the difference between one inch and six inches, the hand can be made to represent it. I do not know of a teacher who could not master—and very soon, too—the principles underlying the work in drawing, and even become skillful in light touch, in free movement, and eye training, or drawing.

Drawing is both a means and an end, and in my judgment teachers—primary teachers, especially—who neglect it not only fail to avail themselves of a very valuable auxiliary, but also neglect an essential element. There is no mysticism about drawing; it is something practical. I want none of that ethereal, fairy-finger wonderfulness about it that I have known teachers to wrap around drawing and call it art. Away with all such clouds! Let the sunshine of truth show us that honest hand training and eye training will give us the skill to draw the forms we see or imagine.

As soon as teachers can see that drawing is a language, that we teach drawing that pupils may draw, and that it is to be taught in a systematic way, to be corrected according to certain laws as oral or written language is corrected (for drawing can no more be taught haphazard than mathematics or language); and, again, as soon as parents and school boards see that this education will multiply one's practical advantages—then will be seen the masses receiving true mind, hand, and eye training, called drawing. Of course, we find poor teachers and very poor work done because teachers do not thoroughly understand the subject, and, as a usual thing, what they do not thoroughly understand is easily crowded out, and everything else is considered of a little more importance. Nevertheless, it should have its place in every primary, grammar, and high school, and every teacher should be qualified to teach it.

How quickly can we detect the change in a school which this æsthetic

study gives! How quickly do we see the improvement in the order, neatness, and accuracy of arrangement! Step from a city school where no drawing is taught to one where good work in this line is done, and note the difference in the pupils. In the former the pupils are slower to observe, the eyes are blind to much that is beautiful around them. The schoolroom shows the difference. It is not beautiful; it is bare and cold; there is not the accuracy shown in the studies. In the latter there is close and accurate observation, and order, neatness, and skillful arrangement in the schoolroom present themselves. We teachers do not always realize the importance that is to be attached to our surroundings in the schoolroom. The influence of beautiful and appropriate surroundings cannot be overestimated. Is it not true that the best and most lasting things we learn are the things we learn unconsciously? Many of the higher and nobler aspirations of pupils are awakened through the influence of a beautiful picture. A servant girl attending a public school where drawing is taught was asked: "What good does drawing do you?" Her reply was: "Oh, I don't know. It makes me work more; for there is something in me now that makes me put the rugs straight instead of crooked." Her æsthetic nature was being cultivated, her idea of order drawn out.

Systematize this work in drawing so well that pupils may be trained in a true space-art education. The study should enable one to express form, first, in solid matter, second, on a flat surface by means of outline shade and color. The first we call handling, making, or modeling; the second, the object, the pictorial, or mechanical drawing. There seems to be a tendency to hold pupils to object drawing, and to neglect the decorative or industrial part of the subject. The decorative or the industrial certainly has its place. It should not be crowded out by the object or pictorial work. I have visited schools where nothing but a little drawing from the model was given; nothing in the decorative, nothing in the mechanical; nothing in the illustrative. We cannot escape decorative art. Look where we will, we can see it.

Children delight in drawing, as they delight in anything constructive or imitative, and the reward for each effort to place what is seen is a quickened observation and a taste for form and proportion.

I want pupils to draw from object, and not to copy from the flat or some one else's idea of form. Then to draw from memory. Ideas of form must first be obtained by observation before they can be elaborated by the imagination. A little child sees few difficulties and fears nothing, but puts bravely on the paper his mind picture; the older pupil's self-consciousness arises from his knowledge and ability to criticise and his inability to express as he knows the picture.

Draw out the primary pupil in plenty of illustrative or imaginative

drawing, and by the time the pupils reach the grammar grades there will be nothing the eye and mind can picture which the hand cannot express.

We need much illustrative drawing. It necessitates clear, concise, direct ideas. By the illustration we see the mind picture.

I remember asking this question in an eighth grade of a large city school: "Is there anyone in this room who can tell me the position of a cow's ear on her head?" The pupils had seen cows many times; I mean they thought they had, but their seeing was not accurate. Their mind picture was not clear. To help them I said: "Think of the cow in front position, then in side view. What is the direction of the ear from the horn?" In this school there was not one pupil who could give me a correct answer. If those pupils had ever tried to draw a cow from a model or real object, they would have had a clear mental picture and could have given a correct answer. It has been truly said we do not thoroughly know a thing until we can draw it. If the mental picture is not clear, the hand, however well trained, cannot draw.

Drawing should not stand alone. It should be correlated with every subject taught; it should illuminate and enrich every study. Avoid all tendency to mechanical methods, which will become fixed habits and hinder the efficient training of the hand and eye. In object drawing look at the whole as a mass, at its mass of light and shade, of cast shadow; then make the hand do.

In botany, zoölogy, geography, and mathematics, what a field for drawing! How can we well teach those subjects without drawing? And yet I have heard superintendents say: "Drawing is all right in itself. Oh, yes, it has its place. But I have no place for it." Think of it, no place for it, and yet teach language, botany, zoölogy, geography, and physics, and still no place for drawing! Make a place for it. Round out your training in every branch. Don't send your pupils out of your schools as you were sent out, with eyes closed to beauty and hands unskilled in hand language. Fifteen minutes a day carried through the grades will give a pupil a very good knowledge and a fair amount of skill. You will have opened the children's eyes to see what otherwise they would have been blind to all their lives. Then, too, notice the effect on the pupil's character. I believe boys are made a little more tender to sparrows and flies who have drawn and studied them closely. Common objects become beautiful when seen through the medium of a pencil. An old shoe is more than an old shoe, and a weed a beautiful plant, when studied in all its parts, in all its forms, with its touches of light and shade and tone of color.

DEPARTMENT OF MUSIC EDUCATION.

SECRETARY'S MINUTES.

FIRST SESSION.—WEDNESDAY, JULY 7, 1897.

The session was called to order at 3 o'clock by the President, F. E. Howard, Supervisor of Music, Bridgeport, Conn.

E. G. Ehlmann, of Milwaukee, rendered a violin solo.

Miss S. Lillian Byington, Supervisor of Music, Moline, Ill., read a paper on "The Development of Rhythm."

The audience was favored by two selections by the Roney Quartette, of Chicago.

Frederic A. Lyman, of Syracuse, N. Y., read a paper on "Eye and Ear Training as Related to Sight Singing."

F. W. Westhoff, Decatur, Ill., read a paper on "High-School Music."

On motion of P. C. Hayden, Quincy, Ill., the following committee was appointed by the chair to report at the next session a plan for forming a national federation of music teachers in order to bring all these teachers into closer sympathy with this department of the National Educational Association :

P. C. Hayden, Quincy, Ill.

F. W. Westhoff, Decatur, Ill.

Mrs. Gaston Boyd, Newton, Kan.

The President appointed the following Committee on Nominations :

Frederic A. Lyman, Syracuse, N. Y.

C. H. Congdon, St. Paul, Minn.

Miss S. Lillian Byington, Moline, Ill.

SECOND SESSION.—THURSDAY, JULY 8.

The department met in round-table session, and discussed the following topics :

"Music in the Normal Schools."

"Music in the Rural Schools."

"How the Music Department of the National Educational Association Can be of More Assistance to the Public-School Music Teachers of the Country."

THIRD SESSION.—FRIDAY, JULY 9.

Mr. Robert Stockweather rendered a bass solo.

F. E. Howard conducted an exercise in singing with a class of children from the Milwaukee public schools.

P. C. Hayden, Quincy, Ill., Chairman of the Committee on School Songs, read the report of the committee.

REPORT OF COMMITTEE ON SCHOOL SONGS.

After considering on all sides the problem presented, and consulting with several members of the association, your committee determined to ask the assistance of all music teachers in compiling a list of songs. Our circular was ready to send out January 1, but a brief correspondence with President Howard revealed the fact that only \$15 had been allowed the section for its entire expenses of printing and mailing circulars and programmes. Having by this time discovered that a complete report could not possibly be made at this meeting,

we decided to hold our circular and to send it out with the programme of the section meeting issued by the President. In this way is explained the very late appearance of the circular letter asking for lists of children's songs.

Lists representing five or six hundred songs have been sent in response to this letter. Some lists were very full. Miss Hall, of Boston, a member of this committee, sent a list of over three hundred classified songs, and Miss Caroline V. Smith, of Winona, Minn., sent a large classified list. We wish to thank those who have sent lists for their prompt response to the letter of the committee. We wish also to request everyone present who has not sent a list of songs to do so at once, naming the composer, and publisher when possible. A small list of good songs may prove more valuable than a large list of songs selected less critically. We shall be glad to receive many small lists.

It may be of interest to know the principles of selection which will be applied in the work of this committee. In the first place, the topics treated in the poems must be of a nature to interest the child. In the treatment of those topics a story should be told or a thought unfolded in a manner suited to the child's nature, and the literary character of the words must be unquestioned. The most perfect literary production that can be written by the most brilliant poet is none too good for the children, if it is written in the atmosphere of the child world.

Nature poems should predominate; the earth and all it contains, the changing seasons, the flowers, birds, rain and sunshine—anything the child has known or may know about the natural world, if written in a child spirit, will give expression to wholesome child-like emotions. We should have no one-verse songs in such a collection as your committee has in view. A fact may be stated in one verse, but it takes three or four verses to tell a story. The literature of all the songs should be even better than the literature of the reading book, and the words should be entirely suitable for language study both in thought and diction.

Our greatest lack is in suitable songs for special occasions, notably Thanksgiving, Lincoln's birthday, and Arbor day. The committee makes a special request that the list may be made as strong as possible in this particular.

It is not necessary for me to attempt to define the position the song should occupy in the musical training of the child. There has been a change of sentiment favoring a better and more general use of the song, and the present movement among our educators is in that direction.

It is the hope of your committee that a worthy, useful, and somewhat complete report may be made if continued another year.

P. C. HAYDEN,

Chairman of the Committee on School Songs.

On motion of O. E. McFadon, of Minneapolis, Minn., the committee was continued and instructed to make as complete a report as possible at the next meeting. The name of Miss Caroline V. Smith, of Winona, Minn., was substituted for that of Miss J. Etta Crane, of Potsdam, N. Y., on the committee.

F. E. Howard read a paper on "The Child Voice." Discussion was led by Mrs. Emma A. Thomas, Detroit, Mich.

Miss Anna Birschard, Anderson, Ind., who was to have discussed Mr. Grigg's paper, gave a short talk on the subject, "How to Establish Good Musical Standards in Public School Music."

C. W. Weeks, of Ottawa, Ill., offered the following resolution :

Resolved, That the thanks of the Music Section be extended to Mrs. C. D. Crane, and the ladies associated with her on the local committee, for the many courtesies extended to this section; to Mr. Wm. Ehlmann; Mr. Robert Stockweather; the Koney Quartette, of Chicago; the Ehlmann String Quartette; to the class of children who so kindly sang for us, and to the members of the parish of Temple Emanu-El for the use of their beautiful church.

Frederic A. Lyman, Syracuse, N. Y., offered the following resolution, which was adopted :

Resolved, That, looking forward to a more complete and systematic development, and a wider field of usefulness and influence, of the Music Section of the N. E. A., a committee of three, of which the chair shall be a member, be appointed to make such recommendations as seem wise at the next meeting of this department.

Frederic A. Lyman and W. F. Heath were appointed on the committee.

Mr. Congdon offered the following :

Resolved, That it is the sense of this meeting that we should have music represented on the general programme next year.

Adopted.

The Committee on Nominations reported the following :

For *President*, O. E. McFadon, Minneapolis, Minn.

For *Vice-President*, Mrs. Emma A. Thomas, Detroit, Mich.

For *Secretary*, Miss S. Lillian Byington, Moline, Ill.

The thanks of the Music Section were tendered to the retiring officers.

Mr. Westhoff read a report of the committee appointed to present a plan for the forming of a national federation of public-school music teachers. Report adopted, and federation formed.

C. W. WEEKS,

Secretary.

PAPERS AND DISCUSSIONS.

THE DEVELOPMENT OF RHYTHM.

BY MISS S. LILLIAN BYINGTON, MOLINE, ILL.

Music is composed of two great factors, rhythm, or time, and tune.

Tune, the second factor, is dependent entirely upon the first, and consists of different sounds, rhythmically produced.

Rhythm was the first to be developed. Whether it came from pre-historic man trying to imitate Mother Nature we know not. We know that instruments of rhythm were the first to be used, and the kettledrum of today is but the evolution of a stick pounded against a hollow tree. Not a nation of the world but has this germ of the foundation of music strongly marked in its development.

Given any number of musical sounds, and unless they are held together by this bond of accent, what impression do they leave, or what influence do they exert? In listening to that matchless composition, the "Moonlight Sonata," the rhythm holds us. In the smooth, flowing movement of the first part the chords are so strong they would be but discords, were they not changing, or seeming to, as the measures lure one deeper into their mysteries. In the *presto agitato* the sounds would be but confusion of noises, were it not for the tumultuous waves of rhythm that sweep with constant regularity through it.

Careful observation, together with self-examination, indicate that this part of the music life is not as faithfully taught as tune. All children do not inherit a natural aptitude for rhythm. "Feeling for accent is undoubtedly a natural one, yet in practical life it is far from being universal. When the time proper, with divisions, etc., has been faithfully taught, we find pupils totally deficient in the rhythm of the whole; they will play or sing one measure fast, the next slow, without a clear conception of the time in its entirety." Our work is to avoid, if possible, this tendency.

As in the study of voice or instrument we find many exercises that seem mechanical devices to tire us, but which eventually develop a fine technique, so must we work that we may awaken this feeling for rhythm that lies sleeping in the child's mind.

We have certain established rules regarding the representation of music that divide it into measures. These represent the real things of music. As "A chain is no stronger than its weakest link," so a song is no more rhythmical than its weakest measure. How are we to read? Musically, the same as arithmetically, we must begin with the little "two-and-two-make-four" problems; that is, the measure—the time-table of rhythm.

The time must be kept, and, as a result, felt, in the simple measure itself; then in measures, one after the other, over and over—mechanically, it may be, at first, as regularly as the clock, and as unceasingly, before we can bring out the rhythm of the whole.

It is a well-known fact that our curricula are overcrowded, and each year brings something in addition to the preceding for the regular teacher.

The question is this: How may we economize our own and the pupil's time and make him master of this problem? Can we train him to think time? Shall we use a system of time names? Is it better to have a pendulum before the class? Perhaps the ticking metronome is best. Shall we keep time by individually marking it?

No child can be taught an abstract thing *per se*, and thinking time without some concrete manifestation in the beginning is an impossibility.

A system of time names is commendable. The accented note is then given a name and reality. In so far as they are only a means, it is wise to use them. When, as is frequently the case, time names seem to be the end, and are resolved into mere humdrum syllables, they should be abandoned.

Investigation shows that, with inexperienced teachers, time names are often a hindrance in the work, and the experienced teacher will have devices of her own for bringing out this subject.

If the pendulum is used, we may, after hours of drill, realize that the pupil's head is also swinging, his foot tapping the time, as he interprets it himself. He does not feel the rhythm it indicates, unless he has some inward conception of the time, which he will manifest by the accent. The pendulum simply regulates the time—does not mark the accent.

For a child who has not a natural feeling for rhythm we must work along the outside line, through the sense of touch, combined with counting. He can feel the accent and beats when he taps lightly with his finger, at the same time counting: one, two; one, two; etc.; remembering the one is stronger than the other parts of the measure.

The teacher may guide the child by tapping, just enough to keep the

tempo regular. Systematic practice in this way will develop an appreciation of rhythm.

Very well, you say, but how about divisions of the beat? The dotted note, triplets, etc.?

The question, When should this development begin? has come to each of us. The first year in school? Surely before that. The seeds are sown during the cradle period of life. Every child enjoys rocking, a swing, hobbyhorse, or anything in motion; songs with strongly marked accent; marching, dancing, and the many ways manifested by a swinging to and fro.

In cities where the kindergarten is a part of the public school we find it working along this line. In Chicago I saw one teacher who was bringing this out in a marked degree, and teaching, unconsciously, interpretation through rhythm. One was chosen from the circle to act the story the music revealed to her, and, as it changed from march, waltz, "the rain-drops," "the wind," the little mind was very sympathetic, and the feet changed their steps as instantly, showing the deep feeling for rhythm that can be brought out in some children.

Who has not seen girls, as well as boys, straighten up, put themselves into the full spirit and rhythm of a soldier, while singing:

"A drum that can sound,
A musket so brave,
A long wooden sword,
What more would you have?
Trum, trum, trum, de dum, de dum.
Trum, what more would you have?"

or the little girls prepare to rock their dollies to sleep to the lullaby,

"Come, dolly, dearie,
You must be weary,
We have been busy all day.
To bed you must go,
And tomorrow, you know,
Together again we will play—
Come dolly, dearie, come."

The songs we teach have great influence in this direction, and the same thought should be carried all through the grades. Calisthenics aid materially in accuracy of time and development of rhythm.

Children are poetical, and very early in life manifest a delight in more than mere nursery rhymes. "Paul Revere's Ride," "Hiawatha," "The Children's Hour," and similar gems, appeal to them; not only the story, but the way in which it is told. What we wish to do is to plant the seed of desire in the child's mind. The work on his part will follow.

Too much stress has been placed upon that word "develop." We

would not, of course, do for a child what he can do for himself; but have we not sometimes analyzed the life out of a subject? The same may occur in our music.

Lastly, much really depends upon the individuality of the teacher. If she has this consciousness, her own personality will be one of the strongest factors in revealing to the child this part of life, as well as music, that he may grow to live in harmony with the world, and daily recognize this great bond that holds creation together, ever growing broader, yet stronger, until we come into touch with the divine.

DISCUSSION.

MRS. GASTON BOYD, Newton, Kan.—There is no necessity of a barren exercise in connection with the study of music. A lesson in pure technique, if properly presented, will be infused with life and with intense interest. It is a principle in education that nothing shall be done for the child that he can be led to do for himself; so, in the development of rhythm, the child should be led from what he already knows to the solution of the new problem which is presented. Children are not all alike; some learn more readily from observation than do others. The nature of the child must be taken into consideration.

With regard to the use of songs in the lower grades, they should occupy in this branch the same relation as speaking pieces, quotations, poetry, etc., sustain to the study of reading.

It is said, in defense of the use of songs *versus* the study of notation, that a child must learn to speak before reading. With few exceptions the child comes to us prepared to study notation. He has heard songs from his cradle; he has learned to sing them at his mother's knee; he has heard them everywhere as he has heard speech. He may have heard them and learned them in a crude fashion; but so has he construed his sentences and made his wants known in language fully as crude.

To the degree in which a lesson in music leaves the child stronger, mentally, may be measured the success of the teaching. Nothing tends more directly to develop this strength than the ability on the part of the pupil to solve his own difficulties and accomplish his own work.

C. H. CONGDON, St. Paul, Minn.—Rhythm should not be taught by mechanical devices, but through real music. A good song tastefully sung will give the child better ideas of rhythm than hours spent in the tedious practice of time names or in barren exercises.

Once the spirit of song is aroused, the elements of rhythm are unconsciously acquired. It is then an easy matter to differentiate the various forms of measure and present the symbols used to represent them. The child is full and bubbling over with the essence of rhythm, and it is now only necessary to aid him in classifying the concepts already existing in his mind.

Call his attention to one thing at a time, and give him drill in reading that one thing at sight. Teachers are prone to introduce too many things at once, and oftentimes the tune is so difficult that, no matter how well grounded the pupils are in rhythm, they stumble and fall because they cannot think tones fast enough.

Their attention should be called to one thing at a time, and that should be introduced

through easy tune, and many exercises or examples should be given. Six or eight exercises are not sufficient to develop the ability in pupils to sing the new problem at sight. Fifty or a hundred are required.

The elements of time as well as tune are taught primarily by imitation. Children are easily led by steps from plain measure to, first, the divided beat, and then to the beat-and-a-half note. The latter consists simply of bridging the voice from the undivided beat to the first part of the following divided beat. Six-eight time should be analyzed in like manner, presenting one fact at a time, and developing it through easy tune.

Physical training and calisthenics, well taught, are a great aid in developing rhythm in children.

EYE AND EAR TRAINING AS RELATED TO SIGHT SINGING.

BY FREDERIC ALLISON LYMAN, SUPERVISOR OF MUSIC IN PUBLIC SCHOOLS,
SYRACUSE, N. Y.

There can be no doubt that both the senses of sight and hearing are necessary to the so-called act of sight singing. As to which one of the two is more important teachers will disagree according as they have been trained to present their work. In the elementary stages of the work there is no doubt in my mind that the ear is of more value. In the advanced stages of the work one sense is as necessary as the other.

Musical power is first gained through the ear. The auditory nerve is the tell-tale to the brain, the seat of all real impressions of tonal concepts. Can all children hear correctly? No; neither can all children see correctly. When children fail to distinguish quickly tone progressions, many teachers say such children have no voice. What they mean is, they have no ears, or, rather, no well-defined idea of tonal concepts.

These pupils are the unfortunates, and the teacher's ability is shown by the manner in which she trains them to a knowledge of tones. Do you say that all children can be made to think tones correctly? No, not all; neither can all learn to spell; but, if handled by a teacher who is conscientious and persevering, the number may be reduced to a minimum. I wish to put in a strong plea for individual recitations in music. The teacher who simply does chorus work in music only one-half fulfills her duty. Time is no criterion of results. It is not so much a question of how much time is spent, but what is being done while lessons are going on. Are you making music study in your schools of benefit to the individual pupil, or are you simply giving children a pleasant time during the singing period? Could we look deeply into the minds of those children who do not sing the scale accurately, what might we not discover? At least two kinds of non-thinkers are readily distin-

guished : those who shout on with perfect abandon, wholly unconscious that they are singing incorrectly, and the larger class who realize that they are deficient and that quick tone thought is lacking in their make-up. The first are hard to cure, the second less so. Surely, the teacher who loves mankind and her art will stoop down, take these unfortunates by the hand of thought, and assist them to rise. Do you say it cannot be done? My answer is, you have not conscientiously tried it.

Rest assured of one thing : Anyone who has helped a so-called monotone, or child of imperfect tone sense, to a correct mental solution of the series of sounds known as the slide or scale will ever after be the recipient of cordial appreciation from such pupils, even though at first it is not demonstrative. The rank and file of children hear more or less correctly from the start, so make simple vocal records with accuracy. Having this ability, the step toward musical thought and eventual sight singing is imitation of some sort. The model should be the best possible, otherwise the child unconsciously forms a low ideal of beauty from the start. Harsh tones are as offensive as harsh colors.

Never was greater mistake made than that any teacher is good enough for the lower primary grades. Some are placed there because they cannot discipline higher grades. What if discipline of mind is lost in the attempt to get only discipline of the body? Unfortunately many of the regular teachers in the lower grades of our schools have not absolutely correct ears, carefully managed voices, and magnetic musical abilities.

Having taught the beautiful rote or imitative song correctly and musically, many supervisors and regular teachers fold their hand with complaisance, imagining they have done all that should be required in the teaching of music to the primary grades.

Rote songs please—they do not give power ; they tickle the ears, but do not teach a child to know tones as comparative objects of thought. White very truthfully says : "Children may be kept swinging on the gate of sense when they are fully prepared to make easy and fruitful excursions into the garden of thought." As soon as the major scale is taught as a whole, a unit of moderate musical ability has been established. The child has something tangible, something concrete. How does he get it? Through the sense of correct hearing, which in turn becomes molded thought. At this stage of the work the sense of sight has not helped. The more faithfully teachers carry out this practice of tone judgment, the better will pupils hear music from the printed page when once it is shown them ; not alone that, the better they will solve all other problems of school or daily life. They are gaining power to do. Music is very materially aiding in the upbuilding. The object of thought in music is the regular succession of tones, which is heard, not seen, on the printed

page or blackboard. All tone relations must first be studied through the ear.

Rhythmical work must primarily be done through the sense of hearing. No amount of explanation of written signs or the attempted teaching of fractions, under the guise of musical notation, will aid pupils to acquire a knowledge of the necessary essentials of rhythm. Many supervisors understand this fact. Some, alas, are groping along the shores of representation and abstractness rather than objective conception. Rhythm is first felt in the pulsing of the mind. As no conception can be gained through the written word, so no feeling of rhythm can be gained through the abstract study of fractions. When once the object is known, the mind summons the thought. When once rhythm is felt, then will the picture of a measure have a meaning.

To sum up this feature of our topic: We may safely say that when any new thought in music is presented normally and according to the plan laid down in the presentation of all other subjects by the best educators, all impressions must first be gained through the medium of the ear. Therefore we must conclude that it is the ruling sense.

Having been carefully drilled in the act of singing tones, the child's attention is unconsciously drawn toward the printed signs of music, *i. e.*, musical notation. What more simple and effectual way of recording tones in print has been offered than our notation? It is doubtful if anything will ever supersede it. All other kinds of notation have lived for a time, then gradually faded out of existence. When once the ear has received proper attention, the step between the eye and ear is very short. In fact, there is no step. One sense correlates with the other; the eye sees quickly that the little notes indicate tones, and the voice makes the record. So long as the difficulties of notation are not harder than what has been done through the ear sense, all goes well. Just the moment that the notation precedes ear training, instantly confusion follows. The eye sense, instead of assisting, actually hinders for the time. What is to be done? Simply direct the attention from the printed page, until the ear sense and its consequent mind sense have caught up, after which the eye again performs its proper function—that of calling up musical tones. Take the subject of chromatics, one of the most fascinating and simple features of music; give one class a thorough knowledge of chromatic tone color, as compared with diatonic tone color, by hearing and singing; show a few pictures of the problems, and let them sing the tones represented by the notation. If the process be known by doing, turn to any key you choose, show the same problem in any dress you like. A correct record will be sung. The principle is as follows: If you know a man, it matters not whether he wear a sack or frock coat, whether blue, black, or yellow;

you know him to be the same person. On the other hand, attempt to teach chromatics by the old-fashioned way of explaining about the signs that represent. When all this has been done, the child knows not how they sound; the eye sense has only served to mystify him.

And what shall be said of the training of the voice *per se*, without which all our practice of ear and eye has been vain? How many people hear their own voices? Very few. The ear must again be made the prominent factor in the training of that most subtle of arts, vocal expression. The eye can have but a small part in this. It may note the facial result which certain tones or succession of tones produce; further than that it cannot go. In order that children may learn to sing without harshness and with pure, sweet tones, they must be given a chance to hear ideal tone. Pride comes in at this time and does much to establish a correct basis of tone. Good enunciation and easy singing are as much a matter of pride as of practical voice exercising. Until a child is made to feel the dignity of fine tones, he will not continue to build them. This pride must be brought about through ear training. Shakespeare says, "Speak that I may know you." Today we might say, "Sing that I may hear an ideal tone!" Environment has much to do with agreeableness of tone, and a child's ideal of well-modulated voices comes from contact with them. Herein is music strong as an educational power. It heals the mind. Heart becomes linked to heart, and from concrete expression arises a desire for the best that life affords. Music, therefore, appeals to the senses in a way which no other subject does. Music lifts us out of ourselves and lets us roam, fancy-free, in the highest realms of art. It is a constant flight and return.

Take away the sense of hearing and mark what follows: the ugliest kind of despondency and ill will, as witness the struggles of the master Beethoven. Compare him with Bach; the first deprived of hearing, the other of seeing; the one drinking in new life and inspiration from his very blindness, the other sinking lower into his own thoughts at his awful misfortune in thus being shut out from nature's voices.

Think of all the people whom you have known well in your life. For whom have you the warmest affection and greatest regard? Unless you are different from the majority of human beings, it will be the people who have the sweetest tones of voice; voices full of honesty, assurance, and kindness. We shrink from the person with harshly toned voice, even though it proceed from a good-looking face. Is there a more sorry object than a beautiful face and form from which comes an ugly voice? Sometimes it is the fault of a physical defect of throat; more often there is a lack of good breeding, with a liberal deficiency of ear training.

Having briefly outlined some of the mental processes and results

involved in sight singing as related to eye and ear training, let us take an onward step and inquire into the character of the material we are allowing pupils to read or sing.

Life is too short and valuable to waste on school days with naught but ear-tickling trash. In every course of instruction there must be food for thought; the senses must receive exercise of a healthy tone. The book that makes us think, and not the one that does all the thinking for us, is what we need. Many say: "It doesn't matter what material we have; just as good work can be shown with one kind as another; it is the teacher and not the material that makes results." Only partially true is the statement. A man may be a very practical farmer, but he cannot get a fine crop of potatoes from a brush pasture. A jeweler may be one of the most expert, but he cannot make a fine watch from tin and brass.

If your pupils become ready readers of music, they must study something worth reading. If they have something worthy of attempt, they will gradually grow to love the art and search for its hidden beauties. The mental problems necessary to prepare the mind for this desire for knowledge must be many and varied; furthermore, they must be grammatical. Anything will not do. To put an illy composed or arranged bit of music before a child, as is done repeatedly in some courses of instruction, expecting him to gain correct methods and notions of art and life, is like drawing the picture of the globe in the shape of a pear; neither the form nor the content is correct. Supervisors should be on the alert to suppress any of this juggled harmony that is making its way into the schoolroom, because, perchance, it is cheap and encouraged by some unfeeling members of school boards who know less about instruction than politics. Away with such so-called music instruction! Sad pity is it that the so-called educators of the country are often blindly deluded into the notion that this sort of composition is just as good as, or better than, the masterpieces of musical art!

Music must deal with determinate sounds, and it is only through the proper adjustment of these sounds that pure harmony and melody can exist. There must be a triple affinity in all music that educates in the truest sense. These three features must be rest, suggested motion, and impelled motion. The proper adjustment of the four kinds of triads—major, minor, diminished, and augmented—together with their expanded chords, furnish material for this triple alliance. Music that is built on bare poles of tonic, dominant, and subdominant is not complete.

The suggestions are limited and one-sided. I cannot go further into this part of the subject at this time, as it is too large and would endanger my text.

Healthy rhythm must predominate in any good course of music. The

suggestions of rhythm must also be many and varied, so that the child may be constantly led to observe and conquer all difficulties. Rhythm is the basis of all music, and consequently of all expression. The more we study it, the greater ideas of the universe we shall form. How shall we study it in its fullest extent if our ears be stopped? Even the cadence is but the result of regularity in duration of particular sounds. The contrasts in music are brought about more largely through rhythmical features than in any other way. When it is left to move freely, then does the poetic element seize melody, and it acquires true liberty and independence. Yet art in its greatest sense cannot content itself with melody. All races of people delight, either consciously or unconsciously, in the union of several pure melodies into a complete and perfect harmonious structure. Here, again, the ear becomes the ruling sense. It is here that the creative power is made manifest, and expression grows as readily as the tender plant under the rays of the warm sunshine.

What a sorry sight it is to see children devoting precious time to listless music, to music that has no story to tell, no thoughts to suggest! And yet there are scores of pages of such so-called music being studied, or rather drawled out, each day. It arouses neither the true sense of hearing nor sight, least of all the faculties of the mind which these senses are supposed to help develop.

My plea at this time is that you, as supervisors of this grand art, look carefully at your material for study and see if it is real art or only a makeshift. Will it stand a searching pedagogical test? Is it music in the highest sense of the word? Does it suggest pure thoughts? If so, adopt it; if not, look until you find that on which you can rely. If it does not contain these qualities, rest assured, no matter how much drill for the eye and ear is done, little of value will result. Given pure music, when once our pupils have been trained so that they can look at the printed page of music and silently hear what the eye sees, then will our work mean something.

Supervisors, do you stop with mere eye and ear training as related to sight singing? They are but means to an end. Music, rightly studied, means much more than sight singing. It is only one of the rungs of the ladder. Add to it the training of the voice, the ability to think complex problems in daily life, the thorough enjoyment and understanding that must and do come from a well-graded course of instruction in school music, the stern, though mild, character that is wrought from close contact with its power, and the time is not far distant when the powers that are interested in school matters and education in general will not only see the utility of music study, but, like the ancient Greek and Roman, they will look upon it as one of the chief pillars of a liberal education.

THE CHILD VOICE.

BY F. E. HOWARD, BRIDGEPORT, CONN.

Rational voice training is based on data of two classes: the scientific, which is chiefly physiological, and the experimental data. If, in the musical profession, the same educational qualifications were demanded as are required, for example, in the medical profession, then we might expect—in fact, we would positively have—greater clarity of ideas on the relation of scientific knowledge to practical experience in voice culture. As it is, anyone has as much right to teach voice as to saw wood. It naturally follows that there exists the most distressing chaos of theories, fads, whims, and crazy notions on voice culture, which find their expression in periodicals, lectures, etc. It is no wonder that the common sense of musicians cries out against the pseudo-science of vocal quacks, and extols the good old days of the Italian masters, when pupils were taught to sing, to really make tone, when voices were made to sing so beautifully that their possessors' names live in history. Yet the old singing masters were guided almost wholly, if not entirely, by rules deduced from experience. If the tone was clear, beautiful, well poised, and under the singer's control, as is the bow in the hands of a violinist, then the training was proceeding along safe lines. If the tone was bad, pinched, throaty, then training was proceeding along unsafe lines. When the parts act harmoniously together and there is a proper normal adjustment of all the organs concerned in the production of tone, the result is good. Bad tone follows from ill adjustment of parts concerned in production, and the office of the voice teacher is to correct this ill adjustment and bring about perfect performance of the functions.

As a matter of fact, practical teachers of voice, while they find, or may find, extended physiological knowledge and scientific information of great value, yet, in practical teaching, they are well aware that they must judge as to the proper or improper action of the parts concerned in tone production by the sense of hearing. The laryngoscope, which, as you may know, is a system of mirrors that physicians use for observing the throat, and which voice teachers have also used to observe the action of the vocal bands in tone production, has, when all is said and done, contributed practically nothing to the voice trainer.

We know today little more of the action of the vocal bands in producing the tones of what are called various registers than was known a hundred years ago. Tone colors guide us in determining the registers, being used as much now as ever.

Now, in dealing with the child voice, we are deprived of the benefit of any researches whatever, and must deduce our principles from general physiological knowledge, and, as with adults, determine when the child is using his voice rightly or wrongly by the sounds which reach our ears.

These facts in physiology, however, may be borne in mind, and may constitute a basis for our deduction: First, the larynx grows rapidly until the age of six years, when the vocal bands attain the length which they retain until the age of puberty is reached. At that time the general physical changes which take place in the entire person are accompanied by a more or less rapid growth of the larynx, so that the vocal bands of the male become twice as long as in boyhood, and the vocal bands of females increase their length one-third. There are, of course, corresponding changes in the thickness, breadth, and general strength of the vocal bands. The one point then, which emphasizes itself to us is the small size and weakness of the vocal bands in childhood.

It is also true that the laryngeal walls, the cartilages of the larynx, are in childhood lacking in rigidity, as may be easily understood when we recall the danger of that dread disease, croup, to which all young children are exposed. Death in this disease is occasioned, primarily, by the collapse of the walls of the larynx. Now, as already pointed out, while the vocal bands do not increase in length from six years of age on to the period of voice mutation, yet there is a constant gain in structural firmness of the laryngeal cartilages, and this, together with the increased elastic power and strength which each year brings to the vocal bands of the children, accounts for the constant gain in the tonal strength of children from the age of six.

Bearing these facts in mind, it is just as easy for one person as for another to deduce a safe rule for the use of the child voice in singing, *viz.*, the voice must be used so lightly that injurious physical strain of the weak and delicate organs is impossible. But here we are confronted with the practical side of the question, and the fact that, however familiar we may be with the physiology of the voice, it is only through experimental knowledge that we are able to determine whether the voice is being strained or not, during singing. At this point another principle asserts itself, as before mentioned, *viz.*, that when, in a normal throat, all the parts concerned in tone production are acting in a normal, healthy manner, the resultant tone must be good. In childhood, as in adult life, bad tones, whether nasal, or guttural, or possessing other disagreeable qualities to an offensive degree, are the result of ill adjustment, or wrong action, of the functions. In other words, a good tone is healthy, and a bad tone unhealthy, and as the doctor tells by your pulse, complexion, and state of your tongue the particular disturbance from which you are suffering, so the teacher by the color of the tone must determine the particular

disturbance of the parts from which the singer is suffering. Having set forth these general premises, we may now practically consider the child voice, and those rules which have been deduced by the experience of specialists in this line.

The trainers of boy choirs in England and on the continent have for years understood and practically carried out good principles as to the training of boys' voices. These principles are equally applicable to the voices of girls. They and we today speak of a child as possessing two voices. The one is called the chest-voice, a purely technical name which is applied to a tone rather thick, usually coarse, and which is produced evidently by very full and strong vibration of the vocal bands. Whenever little children sing loudly, they use this voice. The height of compass to which they may carry this voice depends on several conditions. First, the age of the pupil. A child of six years of age will carry the thick voice as high as "E," fourth space, but, as they grow older, they find more and more difficulty in using this voice in high pitches. Then, again, children who have light, firm, fluty voices use the chest voice with great difficulty, possibly because there is more firmness in the cartilages of the larynx than is possessed by others whose voices, while sounding stronger, are evidently produced from weaker throats. The loud voice, so commonly known in the schoolroom, and so foolishly admired, is really, in most cases, a voice which is produced by vocal bands which are less elastic, strong, and much more easily injured than are the vocal bands of those who have much lighter voices.

From the foregoing it will be seen that, as children grow older, they will find more and more difficulty in using the thick voice on the upper notes of their compass. For instance, children of six years of age carry the thick tone as high as "E," with apparently little exertion. Children of ten years of age, unless spurred by great urging, will cease to use it at "C," while girls and boys approaching the age of mutation can hardly carry it above "G" or "A."

The other voice, technically called the head voice, is light in body, fluty in character, and utterly devoid of what is called the reed quality in tone. It is evidently produced by the vibration of only a portion of the substance of the vocal bands. How large or how small a portion is purely a matter of conjecture, for, until the X-ray is applied to this branch of physics, we shall emphatically know nothing, except conjecturally, of the action of the vocal bands.

Now, one conclusion, and one only, has been reached by specialists in the training of boys' voices. It takes the form of two statements: those who, while paying very little attention to the theoretical consideration of registers, declare that boys must use the upper register almost entirely, and must take great care to sing lower tones softly; and those

who frankly say that boys must be required to use the head register alone. As a matter of fact, as before said, it is impossible to tell, even when a boy has been trained entirely in the head register, whether or not, when he sings at pitches below "F," first space, he uses exactly the same mechanical action of the vocal bands as at higher pitches, and it does not matter if the tone is easily produced and is good in quality.

The sole criterion, then, in training children's voices is the character of the tone. The tone which is generally accepted as being the only one for children to use, which is physically safe and beautiful in quality, is the head tone. It may be said that, while the conservatism of bad habits, and the popular unthinking demand for heartiness in singing, or the lack of thoughtful criticism on the part of principals, school superintendents, and others, are obstacles in the way of securing good tones from children, yet, when the habit of using the voice in the right way is once fairly formed, both the mental perceptions and physical sensations form the strongest safeguards for its continuance. There is no teacher who has had experience in training either school children or choir boys in the use of the head voice but knows that it is an easy voice, and one which his pupils enjoy using. So far as the general public are concerned, they may be slow to recognize the value of this light voice as compared with the more boisterous singing which seems to excite their admiration—whether because they love noise, or because they suppose children to be the happier the louder they shout, I do not know. But, as long as the criticism of the musical element in any community is favorable—and it always will be to the class of singing which will be secured when children use their voices properly—the general public will very soon acquiesce.

It will be the thought of nearly all teachers—it is the commonly expressed thought of teachers today—that this matter of securing from children good tone in singing necessarily requires the use of many voice-training exercises, and more or less method especially adapted to this end. On the contrary, the whole secret of the child voice lies in securing a light, easy action at the vocal band. The matter of resonance, tone placing, and a dozen other things which are more or less important, need concern us very little. Moreover, there is great homogeneity in the structure of the resonance cavities in childhood. There is great physical homogeneity in every respect among children. And the use of special exercises to secure the proper use of the voice, or, as we usually say, for training the voice, are necessarily only small in scope and few in number. If good position is maintained, breathing habits will attend to themselves. If the voice is used lightly, if the mouth is opened properly—that is, if it assumes the proper position for "E," when we wish the pupil to sing "E," if it assumes another position, and the right one, approximately, for "Ah," when we wish him to sing "Ah," and so on

through the various forms which constitute our vowel sounds in song — most conditions for voice use in training will be fulfilled. Elaborate systems of voice culture are entirely out of place in the schoolroom. The voice should be used properly in singing every scale, and every song, and every exercise. No special exercises are needed, except as a kind of a vocal tonic. Every chorus director knows the value of vocalizing a page or two of music during the course of rehearsal. It sets up good singing action and good tone ideas, which carry themselves over into the singing of words by the chorus. Just so in the schoolroom. The use of some voice exercises at the beginning of a singing lesson will be found easily to set up a good standard of tone in the mind of the pupils. But the voice of the child does not lend itself to extended training. It may be doubted if the large amount of work to which special choir boys are put, in order that they may become soloists, is not detrimental.

In this connection it may be said that, where it is desired to bring about the change from the use of the so-called thick voice to the use of the head voice, it may be necessary to adopt certain stringent rules in regard to the amount of power which shall be used; it may be necessary to require the very softest of tones, and it may also be necessary to limit the range, as, for instance, to "E," first line, below which the voice shall not be carried; yet these rules will be found capable of great relaxation when once the habit of using the voice in the right way is formed. There is nothing intrinsically wrong in singing low, if the voice is used lightly, without physical strain, and the resultant tone is satisfying to the musical ear. It is nonsense to say a child must not sing at that pitch at all. However, the ease with which children break into the thick voice at lower pitches constitutes an element of great danger when music is taught by unskilled grade teachers.

In conclusion, let me say that music in the public schools, after all, should be musical, and that the finest results, as far as tonal beauty goes, that have ever been attained by skillful choir trainers with their boys, or any skillful teachers in different schools of the country, are none too good for every teacher and every school in the land. To get good singing from children requires a little knowledge and a good deal of taste, and the exercise of faculties that are possessed, actively or latent, by nearly every teacher.

It is possible to teach what we call sight singing, and to do it in such a way that very few ideas of music, real music, enter into the life of the child. Perhaps it has been the tendency among teachers — and a very natural tendency, due to the practical character of Americans — to emphasize the strictly practical side of school music; and, on the other hand, there has been a strong tendency by certain educators to belittle the practical teaching of notes, and to demand that school music

should appeal only to the æsthetic side. The fact is that the language in which music is written is, in its signs and symbols, very simple. It will be but a short time before the skill and industry of the music supervisors of the United States will find short, pedagogical, and practical methods by which note reading will be mastered almost as early in school life as the signs of speech language. But, however this may be, the one thing which our profession demands at the hands of its every member, and the one thing which the public demands of us, and which every musician calls for, is that the character of our work, even in such simple particulars as singing up and down a scale, shall be strictly musical. Implying, as this does, primarily the proper use of the voice, and the inculcating of ideas day by day, by precept, by example, and by practice, of beauty of tone, it will be understood why so many of us are emphasizing, with all possible force, the consideration of the child voice.

With the thousands and tens of thousands of grade teachers, more or less unfitted for teaching music, who are obliged to present the subject from day to day, it may seem impossible that children throughout the land should be taught to sing in a proper way. But it is possible. There is no mystery about good singing. It is easier to sing right than to sing wrong, as it is easier for water to run down hill than up. Consider the subject in the simplest way possible, and do not get hold of some puzzling detail and magnify it. Take it for granted that your children, on the whole, prefer to do a thing in the right way. Do not get excited at unthinking criticism, which often proceeds from a desire to keep busy, or appear wise. Hold on your way firmly, steadily, good-naturedly, and, whatever the future may bring of good to school music in our country, be sure you have done your share.

DISCUSSION.

MRS. EMMA A. THOMAS, Detroit, Mich. — In a large number of schools, as in my own, we have twelve minutes a day allowed for music. In this time we must train the voices of the children, teach them to read music, and teach them songs for pleasure, as patriotic songs, folk songs, etc. How to accomplish all this in so short a time is the problem. I will give a few suggestions to supplement Mr. Howard's paper.

To obtain the best results in tone production is to begin at the top of the voice and work down. Second, keep the throat open and relaxed. Again, sing plenty of songs with high tones. If we begin with, say, "middle C," most children will produce what is commonly called a "chest tone." If a scale is now attempted, they will carry this "chest" or "thick" quality up beyond its legitimate limit, causing a contraction of the throat, and a forcing and straining of the voice, which make an open throat improbable, if not impossible.

Therefore, begin with a pitch on which the child cannot use either the low or the

middle register, say somewhere about third space "C," and when a scale is to be sung, sing it descending. In difficult cases it will often be found necessary to begin higher. An advantage of beginning high is that the tone is produced without "throat effort" (throat strain), and it is possible, and easily so, to train the child to sing "with his voice, and not with his throat." Of course, power is not to be aimed at at first; that will come later, and the child who uses his high quality exclusively will be able to sing long at a time without fatigue.

Position is a very important factor in good tone work. We must have good erect position, either standing or sitting.

Do not combine calisthenics and singing; the voices of the children will surely suffer. Where our teachers wish to have marching with music, and have no musical instrument, I suggest that a little choir be formed, and, standing in the front of the room, they can sing a little marching song while the others march.

Be sure that the temperature of your rooms is kept even; if the air is impure, raise the windows, or do something to freshen it.

Do not have the singing lessons immediately after recess. Never tolerate loud, harsh, coarse singing. While the large majority of my teachers have pleasant speaking voices, which has so much to do with pure, sweet singing, I have labored hard with those of my teachers who have not, to have them cultivate a pleasant speaking voice. We all know how quickly the pupils will imitate the harsh, peculiar voice of a teacher either in speech or song. How happy we all ought to be that the humdrum, half-spoken, half-sung recitation of a lesson in arithmetic is almost wholly something of the past!

Again, in teaching children the correct use of the voice, the most varied exercise of the imagination on the part of the teacher is very necessary. That teacher will succeed best who can most correctly picture the child's thought and estimate the impressions which given effects produce upon the mind.

The singing exercises of the schoolroom should always be earnest; even very young children's attention can be directed to the sentiment and meaning of certain qualities of tone. Show them how the scale can be sung to express either sadness or cheer; teach them to use a quality of voice suited to the meaning of the words they use. Let them know that the eye is the "window of the soul," and they should express what they sing with their eyes. It is always best to have the reading lessons precede the singing lessons, and if the thought and story of the new song can be brought out in the reading lesson, it will prove a great help to the singing. It would, also, be a great advantage to the children if, from time to time, they could hear their own school songs interpreted by real artists. Through the generosity and great kindness of some wealthy citizens, this is being accomplished in some cities. May it in all!

Be very careful in the selection of your songs; choose songs of bright, lively character, varying with lullabies and songs that will appeal to the imagination. Above all, our children should sing music worthy the name.

HOW TO ESTABLISH GOOD MUSICAL STANDARDS IN PUBLIC-SCHOOL MUSIC.

BY MISS ANNA BIRCHARD, ANDERSON, IND.

It has been said that the mind rules the world, and, in any line of thought, daily contact with master minds cannot be other than elevating

and inspiring. How much more so is this in music, where one meets, not only the mind, but the very personality of the author! I would say, then, begin with the child, educate his ear by hearing the best music, and, when he has once caught its spirit, he will not be content with any but the best.

From the first days of our existence the ear becomes accustomed to good or bad sounds. The more it hears of the better tones, the more susceptible does the ear become to them. Gounod says: "My mother made me her pupil, hence my perception of airs and of the intervals composing them was quite as rapid as my perception of words. Before I could speak I could distinguish and recognize perfectly the different airs with which my ears were lulled." It is a fact that we can initiate the ear to musical language exactly as to spoken language, and can develop the musical sense in a much larger number of children than is commonly supposed.

Then let the songs that the child hears be carefully chosen and correctly rendered in tone and expression, and thus help in forming high ideals, and lay a foundation for future appreciation of good music. This will in time help solve the problem where music is taught in schools. When music is once introduced into schools, let it be placed on the same basis with other studies in the school curriculum and a portion of time be set aside for preparing the music lesson, the same as for number, language, or geography. This will not only increase a respect for the work, but better and quicker results will be obtained.

This last year my school that did the best work was the one in which the principal was in sympathy with this idea and had ten minutes each day set aside for the study of music lessons. Again, let the music teachers be more active and, as much as lies in their power, interest the community at large in getting the legislative bodies to pass bills making music compulsory in all schools.

I was greatly interested in Mr. Congdon's report in that line, and it seems to me the work he is doing is worthy of imitation. Another suggestion made in yesterday's meeting seemed very practical; it was to have a paper on music read before the general assembly at state teachers' associations. This will do much toward broadening the work and awakening interest in it. In some states—and I am proud to say Indiana is among the number—it is becoming quite customary to have music taught at institutes. This affords rare opportunities for the regular teachers to acquire a knowledge of music; for in the mind of the grade teacher, as well as the special teacher, high standards of music should be established. We, as teachers, can then train the pupils under our charge not only to think in time and tune, but can give them the unfailing resource of an intelligent love of music which will be a blessing to them all their lives.

DEPARTMENT OF BUSINESS EDUCATION.

SECRETARY'S MINUTES.

FIRST SESSION.—WEDNESDAY, JULY 7, 1897.

The session opened at 2:30 P. M., at the Spencerian College, with A. N. Palmer, President, in the chair.

President's address by A. N. Palmer.

Report of Committee on Correlation and Co-ordination of Business Branches by J. M. Mehan. Discussion by Mrs. Spencer, Mr. Lyon, Mr. Barnes, Mr. Rider, and Mr. Wilmot. Report ordered to be printed, and referred to the department for discussion at its next meeting.

Paper on "Course of Training in English," by Mrs. Sara A. Spencer; on "Shorthand," by Isaac S. Dement; on "Rapid Calculation and Business Arithmetic," by Samuel H. Goodyear. Discussion by Mr. Mehan and Mrs. Spencer.

The following motion was adopted:

Resolved, That the entire work of the Committee of Nine be referred back to the committee for final report at next year's meeting.

The following committees were appointed:

Committee on Auditing—E. E. Gaylord, B. B. Jones.

Committee on Nominations—F. B. Richardson, E. J. Heeb, H. B. Chicken.

SECOND SESSION.—FRIDAY, JULY 9.

Chas. H. Thurber read a paper entitled, "Is the Present High-School Course a Satisfactory Preparation for Business? If Not, How Should it be Modified?"

H. M. Rowe read a paper on "Laws and Ethics of Business, Duties of Citizenship, and Science of Wealth." R. C. Spencer discussed the paper.

E. H. Beach read a paper on "Brains in Bookkeeping."

The report of the Treasurer was adopted, as follows:

RECEIPTS:

Balance from last report,	\$ 0.68	
From Treasurer National Educational Association,	25.	
By contribution,	20.	\$45.68

EXPENDITURES:

For printing and stationery, Executive Committee,	\$26.20	
For printing report of Committee of Nine,	15.25	\$41.45

BALANCE ON HAND, \$ 4.73

ALLEN DAVIS,
Secretary and Treasurer.

Approved:

B. B. JONES,

E. E. GAYLORD,

Auditing Committee.

The following report of the Executive Committee was adopted :

WHEREAS, The Business Education Department of the National Educational Association deems it due to the public and to itself that a statement should be promulgated as to the present standard curriculum of American business colleges ; therefore be it

Resolved, That, in our opinion, the report of the special Committee on the Correlation and Co-ordination of the Branches of Study Comprised in the Course of Instruction and Training of the Better Class of Business Colleges presented at the Milwaukee meeting, July 9, 1897, fairly embodies and sets forth in outline a standard course for American business colleges ;

Resolved, That we do not desire to discredit business and commercial schools that do not come up to this standard, but would encourage them to work steadily and faithfully towards it ;

Resolved, That we hold it to be a duty incumbent upon all concerned to raise this standard so far and as fast as the conditions of business colleges and the community render practicable ;

Resolved, That, in our opinion, the science of wealth and of human society form the true basis of business education, as they do of prosperous life and right human intercourse and relations, and that only on such recognized foundation can business colleges build a system of education adequate to the demands of business and social interests entitling them to equal recognition with professional, scientific, and technical educational institutions, representing human advancement along important lines ;

Resolved, That the Executive Committee be, and it is hereby, instructed to report to the next meeting of this department courses of reading of business-college students ;

Resolved, That the Executive Committee be, and it is hereby, instructed to furnish to the business colleges of America copies of this said report and of these resolutions through the National Bureau of Education.

R. C. Spencer was appointed a committee to prepare a suitable resolution relative to the death of Mr. L. A. Gray, of Portland, Me., ex-President of this department.

The election of officers resulted as follows :

President, D. W. Springer, of Ann Arbor, Mich.

First Vice-President, A. N. Palmer, of Cedar Rapids, Ia.

Second Vice-President, W. F. Lyon, of Detroit, Mich.

Secretary-Treasurer, D. M. Willis, of Morgantown, W. Va.

Chairman of Executive Committee, Allan Davis, of Washington, D. C.

A vote of thanks was unanimously tendered to Mr. R. C. Spencer for his hospitable treatment of the department.

Adjourned.

ALLAN DAVIS,
Secretary.

PAPERS AND DISCUSSIONS.

PRESIDENT'S ADDRESS.

BY A. N. PALMER, CEDAR RAPIDS, IA.

In view of the fact that we have much important work to do and a very limited time in which to accomplish it, I have thought that, as presiding officer, I could best subserve the interests of this body by making what your committee has been pleased to call the President's annual address somewhat limited in its scope. Had this opportunity been given me ten, or even a half dozen, years ago, I am not sure but that I should have felt it my duty to have advised you quite fully as to the best manner in which to conduct your schools. Exercising my pre-

rogative as chairman, I might have felt it incumbent upon me to have instructed you in the manner in which you should organize, equip, advertise, and operate your institutions, regardless of the demands made upon you, the class of patronage you control, or your environment. Many things may happen in a half dozen years, and it has come to pass that at this moment I feel myself less able to prescribe educational cure-alls to my brethren than I thought myself capable of doing not many years ago.

At our Buffalo meeting, last year, the correlation and co-ordination of the business branches were ably treated in a comprehensive paper by my co-worker, Mr. J. M. Mehan. At this time I thought Mr. Mehan handled his subject well, and I still think so. I am in more hearty accord with the spirit of that paper today than I was one year ago. I think the paper outlined a course of study and practice as broad and comprehensive as the average business training school of today can safely adopt. I say safely adopt, because I am not a teacher who believes it possible for the business school to do the work of the college or the university. Neither do I believe that it is possible for us to correct in the student very many of the deficiencies in his education, caused through a lack of common-school training. The exceptions I find are rare in my neighborhood where students could be induced to come to my school and pay my rates of tuition for training offered them free in the public school. Again, I find that students seeking literary or scientific training, on broad lines, seek those great institutions where hundreds, and sometimes thousands, of students are all working along the same lines; institutions with millions of dollars in endowments, and sometimes paying one noted teacher a salary equal to half the annual income of some good business schools.

Friends and teachers, we have a noble work to do, and, without question, we will continue to do it unflinchingly. I am not a pessimist, and, as I contemplate the horizon of my field of labor, I find myself buoyed up with hope, and unconsciously taking a very optimistic view of the future. As I meet, in all walks of life, men and women who have been trained for the business office by business colleges, and learned what the short business course has been worth to them, I cannot but believe that in many cases we are doing more for our students in a nine-months' business or shorthand course than the literary college could accomplish for them in a four-years' course. We take young men and women who have a fair English education, and train them for positions, not only enabling them to earn a competency, but to mount the business ladder to commercial supremacy, to honor, and to affluence.

For more than thirty years the business training schools of the better class have been doing a noble work, have been strengthening their

courses of study, and, during all this time, have merited and received the confidence of thoughtful business men, as well as the heartfelt gratitude of their worthy students. In my brief experience as a business educator I feel that my work has been accorded from business and professional men the recognition which it merits. I find that, where thoughtful men carefully investigate the work accomplished by the best business schools, those institutions receive a full measure of credit.

I deplore the tendency to undervalue the work we are doing, to place too low an estimate upon a course of training that enables our best young people, without financial backing or influence, to establish and maintain themselves in positions of responsibility and pecuniary profit.

As you sit here today, can you not think of a dozen young men who are now honored heads of families, surrounded, not only by the comforts of life, but many of the luxuries, whose upward course in business dated from the day you recommended them to the positions they now occupy so acceptably to their employers and with so much profit to themselves? Can you not think of a dozen young women who, through the same channel, secured positions that have enabled them to maintain themselves comfortably, and aid unfortunate parents? Could you not name young people of both sexes who have left your school for bookkeepers' or stenographers' positions, and who have, later, used the money so earned in putting themselves through institutions of higher education?

I am a friend to liberal education, and will not knowingly place an obstacle in the path of any young man or young woman who desires a college course, but we, in the middle West at least, are supported by a class of young people who come to us for special training in the branches taught by our best business schools. It is our duty to teach these young men and women, without waste of time, the branches they pay for. We are expected in a nine-months' business course to give them rapidity and accuracy in all classes of arithmetical computations; a rapid, rugged, and easily executed style of writing; a comprehensive knowledge of leading forms of accounts, as applied to the farm, the household, the shop, the grocery, the general store, the dry-goods house, the lumber yard, the wholesale house, commission business, real estate, banking, etc. We are expected to teach these students how to write comprehensive business letters; how to write and use business forms and papers; how to draw up legal contracts; the laws governing business transactions, contracts, etc. Incidental to this we must drill many of our students in spelling and grammar; for, irrespective of their former training, we find that much work in these branches is needed.

Personally, I should like to go farther and, under the head of civics, give my students sufficient training in economics and governmental

affairs to create in them a desire to continue their researches along those lines. I find, however, that the greater number of those who attend business colleges do not have at their disposal sufficient time or money to enable them to meet our wishes in all directions, and I hold it a solemn duty to teach our business-course students, in the most thorough manner possible, those branches I have particularized. In a word, we must get down to the level of our pupils, and not make the mistake of shooting over their heads while aiming at the stars.

To me it is a most painful spectacle to witness the erudite teacher expounding philosophical truths to a class of youngsters who do not understand a word he says, but who are hungering for a morsel of plain instruction in the best methods of figuring interest. I have known business-college teachers who have made the grave mistake of attempting to teach their pupils higher accounting before they could correctly keep a simple cash or personal account, and I have known large-minded, well-educated, cultured business educators who have found it quite difficult to descend from their lofty heights to the level of their students' minds and needs. I am not a believer in daily lectures in business-college work on abstruse, economical subjects, even by men of the most profound erudition. Short, sharp talks, trending in the direction of the students' work, are, to my mind, better.

Young teachers, beginners in our special field, I want you to stick a pin here; I want you to remember a few things I am going to say to you. When you are engaged by the manager of a school to teach in the institution over which he presides, you are intrusted with grave responsibilities. If the school employing you has been successfully conducted for a dozen or more years, has a clean record for honest, thorough work, the confidence of the community in which it is located and of its graduates, you may safely conclude that the man who is responsible for such a condition is fully as capable as you of shaping the policy of his school. Do not try to supersede him in your relations with pupils; do not endeavor to undermine the influence of your employer in his own school. Be upright, be straightforward.

If you think you see an opportunity to increase the efficiency of the school and extend its influence, go to your employer and lay your plans before him. He engaged you to teach for him because he had faith in your mental endowments, your teaching ability, and your worth as a man. In ninety-nine cases out of a hundred he will be glad to accept suggestions from you and consider them. He may not always think it advisable, in the light of his experience, to act upon your suggestions, but he will think more of you for the interest you show. I have in mind many more things I would like to say to young teachers, but one parting admonition, and I will leave you. Do not, after being in the employ of

a school for a few months, consider yourself absolutely indispensable to that institution. You may be an excellent teacher, but the moment you consider yourself the most important factor in the school plans, that moment you vitiate your power to help your employer, and make yourself of less value to him than you were the first day you entered his employ. Pull with your employer, or pull away from his school, is my advice.

I trust our meeting this year will be characterized by unusual good fellowship ; that each member will feel free to express his opinions upon all subjects under discussion, and that, when we adjourn at the close of this session, it will be with a pleasant memory of this convention. As presiding officer, it is my sincere desire to be fair in all rulings and to give each member his full share of the allotted time.

ENGLISH IN BUSINESS SCHOOLS.

BY MRS. SARA A. SPENCER, WASHINGTON, D. C.

The imperative necessity for a thorough mastery of the language of our own country nowhere so strikingly appears as in the administration of its business interests. The peril to home, life, property, and sacred honor from a single erroneous statement is so frequently illustrated that one is appalled to see a youth imperfectly educated in his own language intrusted with grave business responsibilities. If it be true that business statements first, last, and always require clearness, precision, accuracy, force, discrimination, judgment, and skill, then we do the business world a great wrong if we fail to make a thorough training in English a *sine qua non* in a curriculum for business schools. The Committee of Fifteen well says in justification of the large share of time claimed for language studies, "language is the instrument that makes possible human, social organization."

One who is ignorant of the properties of words, and of the laws of construction in language, does not know how to tell the truth, and cannot safely be trusted to understand or to deliver a message, to send a telegram, or answer a simple note of inquiry. In a single assertion, the verb therein having form, voice, mode, tense, and, in relation to its subject, number and person, it may be ignorantly made wholly to misrepresent the facts in a case. A punctuation mark, misplaced by a clerk, has defeated an act of Congress, or of a state legislature. Correct punctuation requires familiarity with phrases, clauses, transpositions, and varied shades of meaning.

A course of training in English for business schools should be simple, yet comprehensive; condensed, yet ample and sufficient. The rank and standing of schools of business in the educational world largely depend upon the standard of attainment in English established and maintained by this class of institutions.

The National Educational Association's Committee of Ten announces the objects of teaching English to be:

1. To enable the pupil to understand the expressed thoughts of others, and to give expression to thoughts of his own.
2. To cultivate a taste for reading, to give the pupil some acquaintance with good literature, and to furnish him with the means of extending that acquaintance.

The committee proceeds to say, and we indorse and adopt it: "Every lesson taught should be a lesson in English throughout his school life." There can be no more appropriate moment for a brief lesson in expression than the moment when the pupil has something he is trying to express. A recitation in another branch may easily undo all that a set exercise in English has accomplished. In order that both teacher and pupil may attach due importance to this incidental instruction in English, the pupil's standing in any subject should depend, in part, on his use of clear and correct English. He should be advised not to choose ignorant persons for daily companions, and thus accustom himself to ignorant language, but to choose for associates the studious and thoughtful, and, as far as possible, the well-educated.

As to the time required for special instruction in this subject in common schools, the Committee of Ten recommends oral instructions the first two years of school life, oral and written instruction in composition the third, fourth, fifth, and sixth years, and not earlier than the seventh school year, that is, about the thirteenth year of the pupil's life, formal, systematic, scientific instruction in grammar.

One year only of this is scientific training. For the remaining one or two years of the grammar-school course, analysis, composition, reading of best authors, and continuance of faithful criticism of English by all teachers of all branches. It is urged that training in English should continue five hours per week throughout the high-school course of four years. The teacher should be an accomplished specialist.

In submitting a course for business schools, this Committee on English, Shorthand, and Typewriting undertakes the gigantic problem of epitomizing these twelve or thirteen years' training in the best of modern graded schools into a course for one or two years in schools of business.

Those who enter business schools may have received the first half or two-thirds of the above described systematic training in English. If so, their lines have fallen in pleasant places. Even these cannot be assumed to have finished English, but only to have well begun. Of these

few we sometimes find certified to the high school, and graduated from the high school, those who will spell incorrectly fifty to sixty standard words out of a hundred, and who are liable to frequent errors in construction.

The large majority of students entering business schools throughout the country, however, have had far less instruction than these, many coming from rural districts, or from various grades below the high school. It is in their favor that they desire to use what they learn without delay, and are in a receptive condition to grasp and appreciate, and are sufficiently mature in mind to comprehend, a condensed course in English.

TIME REQUIRED.

There should be set apart for and devoted to instruction and training in English, including spelling, systematic construction, and critical analysis, not less than four periods of one hour each per week, preferably the second hour each morning, after penmanship, these two topics giving order, color, and style to all the work that follows. The fifth period of two hours on Fridays should be devoted to the reading and study of standard authors, especially those famous for noble, inspiring thoughts and choice, eloquent language. This period will be a school Sabbath, giving an uplift and outlook, healthful and restful to the soul of pupil and teacher.

PRELIMINARY TEST IN SPELLING.

Upon entrance, the student should take an examination in spelling, consisting of 100 words selected from those in common use in business, legislation, domestic and foreign news, and social life. He is likely to be satisfied with the limited vocabulary he has acquired, and to object to instruction in spelling. This test will be an illumination to him. Few can pass at 90 per cent. to 95 per cent.; and a business correspondent should not be liable to even from five to ten errors in a hundred selected words.

The rank and file of students in business schools need to add to their vocabulary from 3,000 to 4,000 words which they have not generally, up to this time, had occasion to use. This can be done in dictation exercises, 20 words per lesson, 4 lessons per week, of 20 minutes each, in 40 weeks, or one scholastic year of ten months, *i. e.* :

Words.		Lessons.		Weeks.
20	×	4	×	40 = 3,200 words ;

and these words should immediately be used in original construction in the language lesson of 40 minutes that follows. No dead words, whose meaning and use are unknown to students, should be carried in stock. The entrance examination in spelling furnishes a standard of measurement which should be applied to subsequent monthly examinations of

a similar character throughout the year, to test progress and encourage student. Every error should be corrected in red ink.¹

EXAMINATION TEST IN ENGLISH.

To develop a candidate's present practical knowledge and use of his own language, your committee recommends that the following test be applied without exception, the question being, not where nor how he was previously educated, but how he habitually uses the English language :

1. A page of straight copying matter, involving a considerable variety of capitalization, punctuation, paragraphing, and construction, as a running debate, rapid dialogue, quotations, titles, etc., the purpose being to test mental perception, fidelity of eye, and accuracy of hand.

2. A page of dictation of similar matter, at twenty words a minute, throwing the candidate wholly upon his own responsibility as to all details.

3. A page of errors in construction to be corrected, including twenty sentences, and illustrating through popular errors every law of construction. The corrections should be underscored.

4. A page of original composition, the points being given on examination paper. It may be a letter, or a brief review of a popular topic.

A well-trained English scholar, who is a candidate for business training only, will not object to this examination. He will enjoy it. And if he passes at 95 per cent. to 98 per cent., English training in his case may be made optional.

PROGRAMME OF CONDENSED COURSE IN ENGLISH.

First month. — Four lessons per week : The nine original elements, subject, predicate, adjective (or participle), adverb, object, conjunction, comparison, and peculiar and irregular forms.

If a class is backward or especially deficient, two months may be devoted to this work, which is to be treated as a thorough review of what, it is assumed, has at some time been learned.

Every element must be illustrated by the student in original sentences, introducing words drawn from his new spelling vocabulary.

Second month. Phrases. — Subject-phrases, objective, adjective, adverbial, and conjunctive, introducing, in original sentences, every variety of preposition, and illustrating the danger of a wrong shade of meaning conveyed by using a wrong preposition, or a preposition in the wrong place in the sentence.

Third month. Clauses. — Subject-clauses, objective, adjective, and

¹ Your committee knew a student who rose from 95 per cent. wrong to 95 per cent. right under this training in one year. He was an intelligent foreigner, it is true, but this indicates how greatly he needed that special training.

adverbial, introducing, in original sentences, every variety of subordinate conjunction, and reviewing the declension of personal and relative pronouns, illustrating the common errors in their use in clauses.

Fourth month.—Comparison and illustration of simple, compound, and complex elements, and comparison and illustration of simple, compound, and complex sentences—all illustrations being original sentences by student, introducing daily new words from his new vocabulary. There are seventy-five varieties of complex elements, giving grace, style, accuracy, and strength to composition.

Fifth month. Laws of construction and laws of punctuation.—As all work done by the student in English, and in other branches, has been criticised and corrected as to construction and punctuation, and has been returned to him to be rewritten, he should have acquired a fair degree of accuracy as to habits of construction and punctuation; but for authority, for reference when in doubt, for life-long use, he needs a code of laws upon these two essentials of language.

Since copious, original illustrations on every one of these laws should be required, it may be found necessary to extend the time allotted another month. The regular time assigned to language during the remainder of the school year should be devoted to abstracts and reviews of lectures and lessons in ethics, civics, commercial law, the science of wealth, and other topics of the school curriculum, each paper being criticised and, if necessary, returned to be rewritten. There should be a review of the whole year's course before the final examination for graduation, and the tests applied at the close should cover the same ground as those given at the beginning to ascertain whether training in English was imperatively needed.

A standard of 90 per cent. to 95 per cent. should be demanded for graduation from either the business or the shorthand department, and the standard should be the same for both departments. Throughout the course there should be developed in the student a love for the study of his native language, an admiration for its beauties, an appreciation of its power. One year is sufficient for the systematic course herein outlined. A lifetime of careful research, critical analysis, and faithful practice still leaves a mine of wealth to be explored.

SHORTHAND.

BY ISAAC S. DEMENT, PRESIDENT SHORTHAND TEACHERS' ASSOCIATION.

Shorthand is so large a subject and the misunderstanding of it so great that I feel it is impossible to explain the one or remove the other within

the time allotted, and I shall not attempt either, confining myself to some general remarks.

Shorthand is a science that appeals, at times most beseechingly, to the artistic sense. As paint is paint, whether on the canvas, showing, with intricate precision, the magnificent conception of the artist, or upon the house, mixing its colors with the hues of nature; so shorthand is shorthand, whether its imprint upon the page be a photograph of some impassioned utterance or a distorted image, showing dim fragments of the glorious ideas of the speaker. This is according to the accepted definition. But shorthand is as broad as the English language—it is a full, a complete language. It responds, in the hands of an artist, with quick sympathy, to all the moods, to all the passions, and submits to the monotony of ponderous logic. It is like the trolley of the electric car, the throttle of the locomotive, the sail of the ship. It is that which preserves and gives force to individual power. Without it we should have few great men, for their greatness would not be known; without it the commerce of the entire world would not have reached its splendid proportions. If it were swept from existence, by some such miracle as occurred at the Tower of Babel, when would the world recover from the shock?

Shorthand has made England and the United States the powers they are. And yet the business educator does not concern himself about it. He employs a shorthand teacher and advertises to teach shorthand. Does he look into the pedigree of the system? Why should he? Does not its author claim that it is rapid? that it is accurate? that it is easily acquired? Is that not sufficient? Does he feel called upon to ascertain whether it is an untried theory or a tried and proved system. If he be a hunter and wish to purchase a canine assistant, will he look into its pedigree? If he enjoy driving, will his 2:30 team be scrubs or thoroughbreds? If he desire a critical chemical analysis performed, will he employ some one to do it who has had no experience in such matters?

In all affairs of life the business educator is most critical, save in shorthand. There are hundreds of bicycles, some good, some medium, some bad; and there are many shorthand systems based on the grand ideas of Sir Isaac Pitman, some of which are good, some medium, some bad. Will the business educator ever come to require the author of a shorthand text-book to prove his theories by actual demonstration? An author who cannot do personally all that he claims can be done by his system should not be permitted to delude the public, and the business educator should not be a *particeps criminis* in the transaction.

Pardon this digression, for it is inseparable from the subject. As I have said, shorthand is as extensive as the English language, it is its

counterpart. Therefore, instruction in English is prerequisite to, or must go hand in hand with, instruction in shorthand. The two are so connected that the latter is useless without the former; but a combination is easily formed by which any defects in English may be almost unconsciously repaired as the study of shorthand and typewriting is progressing.

Instruction in shorthand must be positive; there must be no doubts arising in the mind of the student. Lesson by lesson must be the rule. The foundation must be well laid and must be weighed down—forced down to bed-rock—before the superstructure is placed upon it. The principle or principles in each lesson must be so impressed, so indelibly impressed, upon the mind, before the next lesson is begun, that there shall be no necessity for review. And no principle can be said to have been mastered which the student cannot instantly correctly apply.

What art is there in the instruction of which rapidity is not the supreme element? The student of the piano is given the scales and is told that he must acquire such a swiftness in their execution that the passage of time between the notes is hardly discernible. The instruction upon the violin proceeds along the same lines. In fact, rapidity is the desideratum.

It may be said the elements must be first acquired. True, and they must be *acquired*. The student should not be permitted to leave them until they are *acquired*; and “acquired” is a positive term—it means undisputed possession, possession independent of all and everything else. That is, the student must *possess* the elements; they have become his property, independent of the text-book and of the teacher.

As the railroad train must proceed at moderate speed over a poorly constructed, loose, and uncertain roadbed, and may proceed at the limit of the locomotive’s speed over a roadbed properly ballasted and secured, so the shorthand student is compelled to write at less speed when his knowledge of the elements is uncertain than when he feels the power of positive knowledge.

The plan of getting the student through the text-book and into the speed class, before he receives any knowledge of speed, is on a par with instruction in arithmetic without examples. It is quite like a change of country and of language—it is beginning anew; it is a return to all the discouragements passed over, with the addition of others.

Let theory and practice go hand in hand. Give the student frequent glimpses of the road ahead, and the difficulties will be less discouraging; the bugbear of speed will be overcome before it can do any damage; for the student will steal upon it so silently, so positively, that he will be taken unawares and captured without a struggle.

RAPID CALCULATION, BUSINESS PRACTICE, AND HIGHER ACCOUNTING.

BY SAMUEL H. GOODYEAR.

The writer would never have chosen such a combination of subjects for a twenty-minute paper, but as he has merely by request of the committee taken the place made vacant by the inability of another to be here today, he has had nothing to do with the selection or phrasing of the subject.

As we regard it, the subject given is a trio of subjects, each one of vital importance in a commercial course, and each one worthy of an extended paper and a spirited discussion.

As rapid calculations and business arithmetic are intimately connected, in fact, are but parts of the same science, we will discuss these topics briefly, and leave the subject of higher accounting for another paper.

There is great diversity of opinion on the subject of rapid calculations. Some teachers in their enthusiasm for rapid calculations collect together a vast number of so-called short cuts, short methods, mathematical conundrums and puzzles, and drill the youthful mind in this kaleidoscope of figures, hoping thereby to develop rapidity. Such rapidity, in the writer's judgment, develops inaccuracy in the student, which is more to be condemned than slow processes.

The student whose mind is kept on the rack constantly to think of some short cut in figures that is adapted to the problem in hand, is far more likely to obtain inaccurate results than the one who uses the ordinary methods of computing and gives his whole thought to the securing of accurate results.

Strictly speaking, there are but two fundamental or primary processes in arithmetic—addition, adding to or increasing; and subtraction, taking from or diminishing.

Multiplication is only a rapid method of adding equal quantities, and division is only a rapid method of diminishing quantities by taking away the divisor a given number of times. Every time that we multiply or divide we are using short methods that seem like magic to the uneducated.

Addition of columns of figures has called forth a number of processes for developing rapidity; and well it may, for more than three-fourths of all computations in business consist of addition of long or short columns.

Some people are mentally constituted differently from others. Some accountants astonish the lookers-on by adding two or three columns of

figures at once with ease and rapidity. Others attempt the same method and fail, both in speed and accuracy. It is our belief, after years of testing of all of the methods presented for acquiring rapid addition, that there is only one way for the average pupil to become accurate and skillful in adding long columns, and that is by daily drill in adding numbers, one column at a time. He should continue the addition drills for a quarter or a half-hour each day, and not rest satisfied until he becomes able to glance up a column and combine its figures into totals as rapidly and accurately as he reads across a printed page, combining letters into words and words into sentences at a speed that is marvelous when we stop to count the number of sounds represented by the separate letters. In learning to read, the student spells out each word letter by letter, making slow progress; but continued practice enables him to combine letters into words at a glance. The same is true of reading figures in a column. The student may be trained to combine figures into amounts as rapidly as his eye can run up or down the column.

I have in mind a brave soldier who went out on the skirmish line, where he might need to fight the enemy hand to hand. He carried a heavy rifle for long-distance firing, a lighter gun for shorter range, and pistols for close range; a javelin for hurling at his enemy, a saber for long thrusts, and a dirk for close encounter. Thus he went forth equipped for every condition he might meet, but so burdened with his equipments that he had little strength left for fighting. Do you think this soldier could do as effective work as one who is armed with a single trusty weapon that he can use skillfully and rapidly, and on which he can always depend?

So it seems to me is the schoolboy who has been trained in a number of alleged short methods in multiplication that are adapted to certain conditions, or combinations of figures that are easily constructed in the class-room by the teacher, but which seldom occur in business. The young man tries to hold all these processes in mind, and determine which one to use in a given case. In many instances the ordinary method, skillfully used, would give the result desired before the young man skilled in short methods would have decided which one to use. The writer claims to have at least average ability in using numbers, and he has been an enthusiastic student of short cuts and rapid processes; but he wants to confess right here and now that he never dares "to bank" on the results obtained by the short cuts until he has tested them by one of the usual methods.

To sum up briefly, what might take longer to argue and illustrate, we are led by schoolroom experience to conclude that the best way to develop rapid calculations is to drill the student in standard methods, day after day, until he shall have acquired skill and rapidity in these methods.

Passing to our second subject, we would mark the distinction between business arithmetic and the higher arithmetic and the practical arithmetic. The latter two treat arithmetic as the science of numbers, and, if complete treatises, they must give every method of computing numbers, even if such methods have no practical use and no commercial value. The student in arithmetic is carried through the various processes, each process being subdivided into cases, with classified examples for each case. He may have learned a great deal about numbers, but he has not acquired skill in the practical processes that relate to business.

The province of business arithmetic is to select the parts of arithmetical science that are required in the business world, give the shortest practical methods of solving business problems, and provide for ample drill in these methods until the student may acquire skill in their use.

If our idea of a business arithmetic is correct, it is not a cyclopedia of numbers, not a collection of mathematical tables, not a symposium of arithmetical conundrums and puzzles in numbers; but a practice book, a drill book in methods of computing that are used by experienced men. Such a book may be made small and compact, in harmony with the modern idea of text-books that are to be studied from cover to cover, instead of the voluminous books of reference that are better fitted to grace a library.

The tendency of this practical age is to small text-books for study, with subject-matter carefully graded and condensed. Such a book encourages the student to master its entire contents, and not to treat it merely as a book of reference.

The up-to-date business arithmetic must keep in touch with business usages. A business arithmetic written fifteen or twenty years ago may be a splendid treatise on numbers, and may afford excellent mathematical drill; but as a text on modern business calculations it may be a classic, fitted only to grace the library.

If our arguments are correct, they would lead to this conclusion: the modern business arithmetic should be a condensed book, containing only practical methods of solving practical problems; it should contain enough of such problems to develop skill and rapidity in their solution. It should not confuse the student by introducing too many methods of solution, but select only the best, and give ample drill in these.

To prepare such a book, the author should not draw too heavily on earlier volumes on this subject, lest his modern book turn out to be a classic merely in modern dress. He should visit the office of the banker and broker, the countingroom of the merchant, the shop of the manufacturer and tradesman, and there ascertain what problems are to be solved, and how men of experience solve them.

The successful business arithmetic should not be merely a compendium

of information regarding methods of solving business problems. If it is to be used in the class-room as a text-book, it should be educational. It should have in view the development of the student. As business men have been led by experience to adopt the practical methods they now use, the student should be led as much as possible to formulate his own rules from his own experience in solving problems. Every process should be introduced by problems so simple that a mere child could solve them mentally; and from such a starting point the student should be led to the solution of the more difficult problems by processes he has seemed to develop for himself. The student should be prepared to comprehend and solve any problem that may arise in business intercourse. No one can hope to be able to do this by merely learning the rules, working the examples after the models given, and proving the work correct by the printed answer. He should be independent of rules; the principles should be so firmly established in his mind that there will be no need of rules, or of reference to the model forms of solving problems. Our experience warrants us in advising students to devote little time to the learning of rules in arithmetic. If they master principles, they can formulate their own rules. Rules committed to memory may be forgotten, but principles thoroughly mastered are never forgotten.

One of the best means of training the mind for rapid and accurate solution of problems is mental arithmetic. The solution of mental problems in arithmetic develops the student's reasoning faculties, and enables him to formulate his own rule and method for solving more difficult problems. The ideal arithmetic should introduce every practical topic by the use of mental problems, and all problems, whether simple or complicated, should be practical, should have the stamp of business on them; they should inspire the student with the thought that his problems are not meaningless tasks, but living questions like those he will meet when he enters the business world.

Every teacher of arithmetic, and every text-book on this subject, should train the student to use his judgment in the solution of every problem. A few moments of careful thought before starting to solve a problem will frequently save the student a half hour's extra calculation, by starting him right; and, what is still more important, will often give an approximate answer that will aid him in detecting an absurd answer obtained from a proper application of the rule, the result of inaccuracies in calculation. The student should be led to use the high endowments of reason and judgment whenever it is possible to do so, and not allow himself to degenerate into a mere mathematical machine.

*IS THE PRESENT HIGH-SCHOOL COURSE A SATISFACTORY
PREPARATION FOR BUSINESS? IF NOT,
HOW SHOULD IT BE MODIFIED?*

BY CHARLES H. THURBER, THE UNIVERSITY OF CHICAGO.

In Walter Besant's novel "Katherine Regina" one of the characters is a young German clerk, a type of the young German who is becoming such a perplexing element in English commercial life. In his conversation with the heroine a good deal of light is thrown upon the difference between the training given in Germany and that given in England for commercial pursuits. The moral is as good for America as it is for England, and I can, I think, do no better in introducing my topic than to quote Dittmer Bock :

"I find the memory of great English merchants, and I find great German houses — Hamburg is the place where you must look now for great merchants. Did you ever hear of the Godefroi brothers?"

Katherine never had.

"They were boys who worked and looked about them. Perhaps they had read history and knew about Whittington and Gresham. And they rose and became rich; they discovered an island, and they established trade with it and planted it; they became rich; they founded the great German colonial empire of the future" — here Dittmer spread his arms — "which will grow and grow until it swallows up your English colonies one after the other. I, too, shall look about the world until I discover another island like Samoa; then I shall go there and begin to trade and to plant."

"It is a great ambition, Dittmer."

"It has been my resolve since I was a child. In order to carry it out I have learned what I could — mathematics, languages, bookkeeping, shorthand, physical geography, commercial and political history, and the present condition of trade over all the world. I know every harbor and its exports and imports, and the principal merchants who carry on its trade."

"That seems a great deal to learn."

"Modern trade wants all this knowledge. There will very soon be no more English merchants, because your young men will not learn the new conditions of trade. In every office there must be clerks who can write and speak foreign languages. Your young men will not learn them. Then we come over — we who have learned them. For my part, I can write and read English, Swedish, Danish, French, Spanish, Italian, Dutch, and German. Do you think we shall be content to stay here as clerks? No, no. Do you think that I have come here to sit down with forty pounds a year? We are cheap, we German clerks. You say so. Mein Gott, you will find us dear! We are learning our trade: we find out all your customers and your correspondents: we learn your profits, and we undersell you. We do not go away. We remain. And presently, instead of an English house, there is a German house in its place, because your young men are so stupid that they will not learn."

At this point Dittmer was quite carried away, and became the American newspaper German.

"I study English commerce—I study how it began and why it is now coming to an end. The English clerk will not learn anything, and expects to be paid like an *Amts-richter* at least. In *Deutschland* we learn, and we are poor at first. *Ja wohl*, we are poor, but we can wait. It is your high salaries in your army, in your navy, in your church, in your trade, in your administration, which ruin Great Britain. Everywhere the German merchant drives out the English and the American."

This is a very clear statement of the problem. Upon the solution of this problem depends the commercial progress of our country.

It has been characteristic of Anglo-Saxon education, both in England and in the United States, that it has devoted itself almost exclusively to humanistic training, to education which shall make men better, because broader and more cultured citizens. We have developed excellent technical schools, which train men for engineering and architecture; but these are essentially professions. In all our educational literature, however, it is frequently avowed, and always tacitly allowed, that it is beneath the dignity of educators to undertake the task of fitting youth for a specific work in life. It has been often said, and is widely believed, that a college education is a positive damage to one who wishes to pursue a business career. This point of view is very well expressed in letters I have received from prominent Chicago business men upon this question. One writes as follows:

I have known of cases where college training has given its recipients such a pedantic turn of mind as to be an actual hindrance to the broad and liberal policy now so necessary to develop and sustain large enterprises and undertakings.

Another says:

If the young man adopts a commercial career with a view of making it his support and that of those who may be dependent upon him, the years spent at college would be a serious loss to him and, in a measure, even unfit him for the work before him. To gain a practical knowledge of business, it is necessary for the young man to begin at the very bottom, which implies, in most instances, menial tasks. The boy of fifteen or seventeen years of age easily adapts himself to these, but not so the college graduate, who would surely feel a degradation in having assigned to him tasks which usually fall to the lot of the apprentice.

Still another gentleman says:

The reason why so many college men do not prove to be good business men is that there seems to be a tradition against a commercial career, as compared with a professional one. If the college-bred man, after going through college, would commence where the errand boy who enters an office begins, or a stock boy who goes on the stock floors—he would learn all the intricacies of business by practical and daily contact. He would make a far better merchant, all things being equal, by reason of his superior mental equipment.

Another gentleman states: "I would intersperse some business training with years of study."

These suggestions from practical business men of high standing bring certain other aspects of the problem before us. In its fundamental char-

acter the high-school course of today is essentially the same as the college course, and, therefore, the objections urged against the college course, if they be true, hold good against the high-school course, although to a more limited extent. Is it not true that our whole system of higher education — high school, academy, college, and university — is calculated to turn students aside from commercial pursuits? Is it not shaped from beginning to end rather to encourage professional life? Is it common to find in our higher schools students who are avowedly preparing for business pursuits? We often hear that there is an overcrowding of the professions. Is not the community which supports the present system of education responsible for this overcrowding? In Germany and France it is understood that only the select few will go to the high schools and universities, and the state provides amply to train the others for their appropriate stations in life. There are not only schools of engineering and architecture, forestry, and mining, but also schools for the teaching of all the trades and arts, and schools for giving the training necessary in the broader realms of commerce. In our own country all of these matters have been left to private enterprise. We have a large number of business and commercial colleges, all private schools, generally with short courses. They have frequently produced good bookkeepers and good stenographers, but is there not reason to believe that their courses have been too narrow in their scope, and that these institutions have trained clerks and assistants, rather than leaders and directors of business enterprises? I do not think these schools can fairly be blamed for this, for they have, doubtless, done the best they could; but I do think the communities may be blamed for not providing, at community expense, those fuller and broader courses of study which few can pursue at private expense. There has been rather too much theorizing in every department of the field of education and too little study of the actual facts. In studying a question of this kind, it would seem to be a wise method of procedure to get the views of the business men themselves, who certainly ought to be interested in this question, and who have most intimate knowledge of the facts in the case. To this end, I have undertaken a little study in inductive pedagogy. I prepared and sent out to a large number of business men and bankers, mainly in the city of Chicago, a syllabus, the names having been selected by gentlemen who are acquainted with the commercial life of that city, which I will read to you in part. . . .

I have already received a large number of replies, many of them of the greatest value. The interest taken in the question has surprised me. Not a few have written long, personal letters, covering five or six typewritten pages; and these are, in every instance, men at the head of commercial or banking enterprises of the largest kind. It is impossible for

me, in a brief paper of this kind, to present fully the results of this investigation, but I hope to be able to give some of the most suggestive features. Let me take up the answers to the questions in the order in which the questions are stated. It should be premised that the replies are confined, in most instances, strictly to the question asked. A good many of the replies express a decided preference for a college education for all who are able to obtain it, independent of its value in business. Nearly all of them express the belief that it is well for everyone to obtain all the knowledge possible. But the fact is that for 97 per cent. of our population even a high-school education is out of reach. The answers to the first question, "Should a business man have a college education, or is a high-school education sufficient?" are practically uniformly to the effect that a high-school education is sufficient.

In regard to the second question, "Which is of the most value, the amount of knowledge gained in school or the discipline and control of the mind?" there is no difference of opinion, the discipline and control of the mind being considered of first importance.

The replies to the third question, as to the age when it is best to begin the study of business or banking, are largely in favor of beginning before the age of twenty.

In reply to the fourth question, Latin is generally considered of little practical value. One gentleman, however, qualifies this statement in an interesting way. He says: "It would seem to me that these questions cannot be intelligently answered except under certain qualifications. That you may the better understand what I mean, I will say that the writer hereof has been the chief executive for this business for the past twenty-six years, in the important departments known in trade as law, collection, and credit departments, in which a classical education is not only highly advantageous, but most necessary, while in other branches of the same business such education is in no wise necessary, although, of course, it is desirable. The success of a salesman or a buyer of merchandise does not depend upon his general education. The knowledge of Latin in a business man's training is especially advantageous, provided such a man occupies an executive position, where the dictation of the correspondence connected with the business of the firm becomes a part of his duty."

In reply to Question 5, Greek is not considered of any practical value by anyone.

Replying to Questions 6 and 7, the writers differ somewhat, though scarcely anyone assigns a high value to French and German, except in special cases. German is generally considered more important than French.

In reply to Question 8, mathematics is given a very high position by all those answering.

• Chemistry and biology are not considered of special importance, though several emphasize the fact that chemistry is undoubtedly of great value in certain special lines. One says: "A reasonable knowledge of biology is of value. A sound and healthy body being admittedly a feature of a successful business career, such knowledge as pertains to the maintenance of health and to physical improvement is desirable."

On Questions 11 and 12, there is a surprising unanimity of opinion. Not one person fails to mark history and English exceedingly high; and, almost uniformly, English is given the first place. Permit me to quote a few opinions:

"History, particularly philosophical history, is valuable to the business man. It has a tendency to broaden his views, teach him the relation between cause and effect, and show him that present ills are simply repetitions. It is also likely to make him conservative and less apt to be carried away by booms and unsound political and business theories."

"History is extremely valuable to the understanding of many financial problems which, in later years, will absorb the banker's mind seeking relief from the humdrum of the counter, and at the same time endeavoring to obtain a higher intellectual standing for his chosen profession."

"Should indulge liberally in history and English. Both are valuable to the banker who wishes to reach the head of his profession. This will be particularly true in the future. As the dealings of bankers are more extended with foreign countries, the more necessary enlarged education upon these two points."

"A thorough knowledge of English is essential. Clearness and conciseness of expression are more of a desideratum in banking than in any other calling. The aphorism, 'Time is money,' is the watchword of the banker. Every word must be weighed before it is uttered, and each word as spoken must leave no doubt as to its meaning. How can such a result be obtained without a thorough knowledge of the English language and how to speak it?"

Many say, "English is indispensable." "The value of a perfect knowledge of the English language cannot be overestimated. The business man who can present a proposition in clear, concise, forcible English has a tremendous advantage over his, in this respect, less favored competitor."

"You note the stress I put on the study of English. I am still of the opinion that in the pursuit of our own language we are far behind Great Britain, where the better educated speak and write their language better than it is spoken and written in our own land, simply because our educators do not place the same importance on that study as is done in England, and, for that matter, in Germany, Austria, and France."

If a student of business cannot go to college, ought he to study

political economy in the high school? The majority of the replies to this question are in the affirmative, but frequently with some qualification. Some are decidedly in the negative. For example: "Emphatically, no. Political economy, as taught in the schools, is full of errors; the text-books in use are those which originated among different conditions from those with which we are now surrounded. I believe it was Carey who said that scientists, sooner or later, all agree, but political economists never, and gives as a reason that, no matter what theories are advocated, they are bound to conflict with the interests of some one. Hence, the truth can never be arrived at. Political economy is to be taken up by the banker in after years as a relaxation study, and perhaps also as a means of cultivating and gratifying controversial tendencies."

"While political economy cannot be said to be a branch of banking, it leads the mind to a consideration of public questions that enables it better to consider many phases of banking not directly connected with such study."

Another answer to the question is: "Not if free-trade text-books are used." And still another: "Not unless he has ambition to become secretary of the treasury." Another reply is: "If a student cannot go to college, he certainly ought to study political economy in the high school, and follow it his entire life, if he continues to be a merchant."

"A fair knowledge of political economy ought to be had by every business man, the effect being similar to that gained by the study of history. A man who has acquired some of the principles of political economy at the high school will be very apt to continue in that study through life."

On the whole, the replies are emphatically in favor of the study of political economy in the high school.

The replies to the next question, "If a student cannot go to college, ought he to study psychology in the high school?" are, as a rule, in the negative. There are several interesting statements which time will not permit me to quote.

In reply to the question concerning ethics, or moral philosophy, I must content myself with quoting one or two answers:

"As honesty and plain dealing are the foundation of the success of the banker, it is to be presumed that these qualities are inherent, and, therefore, do not require any elaboration whatever as to their *raison d'être*. Consequently, a study of psychology, ethics, or moral philosophy, as a part of the banker's training, is not necessary."

"Psychology, ethics, or moral philosophy, can be left until afterwards, and, in my judgment, bring best results when pursued after finishing the high school."

"The affirmative reply to Question 15 I would emphasize, for the reason that a right conduct in banking must often find its strongest motive in a future good to the business, rather than in a present advantage, and nothing will better cultivate this than moral philosophy."

After these criticisms, let us consider what we have left of the model high-school programme. First, and emphatically, English. This is given first place by everyone. In these model programmes, prepared by the Committee of Ten, English has a total of 11 periods out of 80—practically one-eighth of the time. Is this sufficient time to give to the most important study? Latin, on the other hand, has 18 periods, or nearly twice as much as English. The second subject that we have left in these programmes is history, which receives in these programmes a total of 10 periods out of 80, or one-eighth of the total amount of time. Is this an adequate time allowance for this most important subject? The third subject is mathematics, which has a time allowance of 14 periods out of the 80 in the model programme.

These three fundamental studies of the present high-school course are cordially indorsed as desirable and indispensable in the preparation for a business career. Obviously, they should be made very prominent in any course of study specially devised for students of this kind. The other subjects of the curriculum of a high school, as it exists today, are evidently regarded as of indifferent value—serving well, indeed, the purposes of general education, but not specially important for the business life. Shall we consider for a moment, then, what subjects ought to be added to the existing curriculum?

About the value of political economy, when properly taught from suitable text-books, there seems to be no question whatever. All the business men consulted upon this subject agree as to its importance. It would seem, too, as though there was sufficient basis for introducing some elementary study of ethics and moral philosophy. Another subject is geography, which is entirely neglected in our high-school course. This would, of course, take the form of commercial geography. One gentleman writes that French and German should be taught, not alone for the discipline, but also for practical use. The immediate future of the best banking in the United States will call for much closer communication with Germany and France, giving practical advantage to the banker who both speaks and writes these languages. A number favored the addition of bookkeeping and commercial law, though in regard to commercial law another correspondent has grave doubts. He says: "Commercial law is a department which requires years of practice to know very much about, and the safe plan for the merchant is to know as little as possible about it, so that he will be sure not to rely on his limited knowledge when he has an occasion that requires the advice of his attorney." Commercial arithmetic is recommended and this comment given: "There is nothing that will help a young man as much during the first years of his banking experience as being able to add or subtract accurately. In Britain a boy can add or subtract as swiftly and accurately the first day he is in a bank

as an experienced clerk can in America. My experience is that American boys have to learn after they enter the bank." Another correspondent recommends the addition of the history of commerce, the history of banking, and the history of economics; also the elements of commercial law, maritime law, and of commercial treaties; along with a thorough training in arithmetic. Another addition suggested is that of the study of "personal economy." We now have, in certain institutions, chairs of domestic economy. The gentleman recommending the establishment of a course in personal economy makes the following comments: "It is not disputed anywhere that personal extravagance is a prominent characteristic of the people of this country. Personal economy must always be one of the essentials to success in business. Put it in."

Another careful correspondent makes the following interesting recommendation:

I would suggest that the study of "human nature," if it could only be reduced to a science, be incorporated in a course of study, for there is nothing which so closely constitutes the key which will open the lock of success as the knowledge of human nature. I do not now recall the name of any science which is particularly applicable to this investigation or study, but I wish to emphasize the fact that there is no one qualification which so promptly and unerringly yields success to one's efforts as the knowledge of human nature, and to know how to handle men with whom one comes in contact. If you will pardon me for elaborating a little on this topic, I will say that I have often thought that it is more closely allied to the practice of medicine than to any other science. If one whose duty it is to control and direct the actions of men has a knowledge, first, of the peculiarities possessed by any given man, and a knowledge also of the specific remedy for that peculiarity, that subject at once comes under complete control, without realizing it, and the operator in the first instance can control the results to be obtained. Like the physician, he must know what ails the patient, and he must know, next, the specific remedy for that particular ailment, and, knowing these, such patient in his hands becomes as the clay in the hands of the molder.

By this I mean, not to control his physical movements, but to control his mental conclusions, to make him think as you think and, as a result, to do as you want him to do in any given business transaction. For illustration, it is a rule of our business, in opening a credit account with any new customer, to require him to make and sign a written property statement, showing his financial responsibility, and if this request or proposition is submitted in an abstract manner, seven out of every ten customers, perhaps, will refuse to make and sign such statement, while, with the proper knowledge of human nature, one can easily succeed in obtaining such written statement from ninety-nine out of every hundred customers. That is what I mean by the knowledge of human nature; not a magnetic or mesmeric influence, but the ability to read one so closely, after a few moments' conversation, as to be able to handle him so delicately as to secure from him whatever may be sought or wanted in any given premises.

Stenography, typewriting, and bookkeeping are very generally recommended.

The last question on the syllabus was: "Do you favor the establishment of so-called 'commercial high schools,' with a course similar to that herewith inclosed?" This course you have before you. It was

presented a year or two ago by Professor Edmund J. James in an address before the American Bankers' Association. There is practical unanimity of opinion in favor of the establishment of such a course. There is also, however, a great deal of adverse comment on the practice of undertaking to teach actual business transaction in school. The course before you would not seem to be open to criticism along this line. Some of the adverse comments ought, perhaps, to be stated, for they will serve as warning beacons in planning a commercial course that will meet the approval of our business men :

"Unless the commercial high school suggested is less theoretical, impractical, and shiftless than those heretofore established, it will prove a waste of time for the student."

"I do not believe in commercial high schools. They profess to educate a young man in every conceivable branch of business, going into the minutest details of every one, and leaving his mind in a jumble, out of which he will recognize only a few when coming in contact with actual business, without knowing why or wherefore. Much better give him a general education, train his mind to thought and ready action, and trust to his intelligence to pick up the details of the business that he is entering upon."

"Business methods cannot be successfully taught by men who have never been in business."

The general testimony concerning the commercial high-school course, which you have before you and which was submitted to these gentlemen for their opinion, is, however, most decidedly favorable. Some of the opinions are as follows :

"Think they would serve a good purpose."

"I would highly favor the establishment of commercial high schools, with such a course as you have outlined, and am very sure that it would elevate the standard of the coming merchant."

"Consider it an exceptionally good course."

"The outline of the proposed curriculum for a proposed commercial high school is adapted in every way for the education of the business man."

"I do favor the establishment of so-called commercial high schools, emphatically. Such an education would, in my opinion, far outweigh the plans proposed for high-school education."

"The establishment of commercial high schools, with a course similar to the one you inclose, and an efficient corps of teachers, would, in my opinion, be a great benefit."

"I think the course of a commercial high school should be shortened to three years. The average age of boys graduating from grammar schools is fourteen years. Adding to these the three years at the commercial high schools, will bring him, in my opinion, to the proper age for the beginning of the work before him."

This gentleman, a former member of the Chicago Board of Education, presents the following as a proper curriculum for a three-year course:

OUTLINE FOR A THREE-YEAR BUSINESS COURSE.

First Year	Second Year	Third Year
Rhetoric Algebra Arithmetic Accounting American history Business correspondence and penmanship French German Geography	English literature Algebra Geometry Accounting General history Geography Commercial arithmetic Industries French German	Commercial law History of commerce Study of commercial products Industrial chemistry Taxation International law Money and banking Study of transportation Spanish German Commercial corporations

Certain important questions now arise which demand discussion, but which I shall not have time to discuss. Should a commercial course be for three years or four years? In case a separate commercial course in high schools cannot be provided, should not provision be made for allowing certain commercial subjects as electives, along with the other subjects of the course? In other words, should not the subjects of political economy, history of commerce, commercial geography, history of industries, etc., be introduced, wherever practicable, and even at some expense, into the present high-school course, as equal in value with biology, chemistry, French, German, botany, geology, physiography, and other subjects that might be mentioned and which are now in all high-school courses? Should not great stress be laid in early years on English, history, and mathematics, which seem to be recognized as the subjects of the greatest importance for business life. Only a comparatively small proportion of those who enter upon a high-school course finish it. The early years, which contain the most students, ought also to contain the studies of the most universal helpfulness. Again, the greatest question concerning the high schools of today is, Where are the boys? In a graduating class of forty there will be three boys and thirty-seven girls. Would the boys not be there if the course contained some studies whose practical value they could appreciate? Would not parents be willing to send them, and the boys be eager to go? Therefore, would not the introduction into our high-school curriculum of commercial subjects, such as have been presented this afternoon, tend to attract the boys to the high school, and thus elevate the educational level of the whole community?

In preparing this brief paper, I did not start out with a theory. I have undertaken to get at the facts from the point of view of the business men—citizens of the community who, after all, pay the bills and, therefore, have a right to say what they shall have in their schools. I have presented, in the main, their answers to my inquiries. I can only regard it as a fortunate coincidence that they seem to agree so thoroughly with my

own views. I do not consider this question as in any sense inferior to any question now before the educational public. It is a question that affects our whole country as vitally as any educational problem can. The world is changing, things are not as they were; we must adapt our education to the new conditions; we must bring the work of the schools into the closest relation to the life of the people. I cannot close better than to quote substantially the closing remarks in one of the letters I have received:

I cannot refrain from saying that the chief obstacle, in my opinion, to the success of the young man of higher education is that he has instilled into his mind a contempt for the mercantile calling. If educators were to infuse a spirit of commercial ambition into their pupils, and would emphasize the necessity for an education of usefulness by such a course as you are now contemplating, the choice between commerce and the professions would be more evenly distributed, and many a young man who thinks himself too good for anything but a professional life, and, in consequence, spends his years in drudgery and disappointment, would achieve substantial results as a merchant and be, at the same time, a far greater benefit to the community.

LAWS AND ETHICS OF BUSINESS, DUTIES OF CITIZENSHIP, AND SCIENCE OF WEALTH.

BY H. M. ROWE, BALTIMORE, MD.

All education has for its object the happiness of the individual, and for its end the development of character, that he may live worthily and to the limit of his greatest capacity for good to himself and to society. Any education, or part of it, that falls short of accomplishing these results is deficient and likely to be harmful.

Not all education is good education. If it secures to its possessor only a trained intellect and keener use of his faculties, without the tempering influences of an equitable judgment, personal honor and integrity, and a love of the truth, it fails in its mission and becomes a menace to himself and to society. A bank cashier who is so skilled in accounts that he hides a defalcation, or a master mechanic who is so clever in the use of his tools that he breaks a safe, can hardly be said to have been benefited by his education.

All education may be classed under two heads: liberal, or that which aims at the highest development of the intellectual powers, without reference to how they may be employed in the affairs of life; and technical, or that which is intended as a preparation for a special calling in life, be it in the professions, the arts, or business.

The general features of the former are familiar to all, being best represented in the old classical course which has been handed down to us

through the centuries, almost from the time of antiquity. The history of education is a story of gradual change and evolution in the old curriculum, by the crowding-in of new subjects one by one, in response to the urgent needs growing out of the higher civilization and the demands of our commercial and industrial developments and activities. Slowly and surely those branches which may be termed scientific have been given a place, which too often has been bestowed grudgingly, until today the scientific subjects predominate even in what may be termed the classical course of study.

A technical education is popularly understood to refer more particularly to the mechanical arts, but it may be properly used in connection with all schools designed to prepare for the practice of any of the professions or callings, and, therefore, the business school is so classed. The technical education is evolutionary even in its short history.

While liberal and technical educations are, in theory, widely divergent in their objectives, the trend of educational progress is all in the direction of unifying and bringing together that which is best in each. The industrial and trade schools are rapidly becoming great centers for the propagation of scientific truths and broader culture, and, on the other hand, many of our oldest and most noted universities are adding magnificent facilities for cultivation in the liberal and mechanical arts and in the sciences.

Contemporary discussion, however, proves beyond question that our plan of modern education is still very imperfect and incomplete. The underlying deficiency is want of organization and correlation, that is, "a proper understanding of the unity of knowledge, the value of ascertained truths, and the importance of scientific methods of inquiry."

The business school is an outgrowth of the commercial and industrial requirements of the last half century, and marks one of the incidents in the evolution of American education. It has its counterpart in modified forms in many of the European countries, but nowhere has its purpose been so narrowly defined, and its curriculum so limited, as in this country. Beginning with the imparting of a purely theoretical instruction in the simplest principles and forms of account keeping, it has grown to include only a few additional branches which are deemed necessary for the purely technical preparation of the accountant for his work. In addition to bookkeeping, with but a few scattered exceptions, the curriculum comprises arithmetic, penmanship, composition, and correspondence, and the elements of commercial law, all of which, with the exception of the latter, should be supplied in our common schools. Consequently our progress has been limited. True, many valuable and useful methods and systems have been introduced from time to time to make the instruction more practical, and better to prepare the student for the immediate duties of his

position, but, viewed from the standpoint of broader education and culture, but little real advancement has been made in the breadth and scope of the curriculum since the institution of these schools.

From the standpoint of the true educator, who looks to the future for his inspiration, the future of his pupils, of society, and of the nation, having in view the greatest good for all, what are the possibilities and limitations of an ideal business education? Shall our schools remain purely technical? Shall we prepare only for the bookkeeper's trade or the stenographer's calling? Have we fully accomplished our purpose when we can only say of our pupils that they are competent bookkeepers and stenographers? What ban is upon us that we can prepare only for the "mechanics of business," for the "mechanism of trading"? Is our technical training isolated from every ray of the light of liberal culture? Is our only function to prepare for business and not for business life—for business and living? Are the thousands of students who close the door to further education when they pass our portals to be debarred from an opportunity to acquire, in this, their last school, that general knowledge which makes a truly cultivated man? Is it outside of the functions of the specialization which dominates our schools to give a more liberal preparation for higher work, so that inquiry, research, and investigation shall become habits to be practiced in connection with the business of life? Is ours the only technical school that is limited absolutely to technical subjects? Are we forbidden to think of the advancement of our pupil beyond the bookkeeper's desk? Is his only preparation for the higher places of business activity to be acquired catch-as-catch-can in the hard school of experience? Can we not, at least, sow the seed from which shall spring the desire for riper culture, broader knowledge, keener appreciation, and that healthful desire for the higher forms of life which is so necessary to the full growth of the whole man? Can we claim to conduct educational institutions so long as we fail to train our young people as to their duties and responsibilities in their social and ethical relations and dealings with others, as well as in recording the transactions of business?

It is a part of our proper function and duty to give instruction in those particular branches which are analogous to and harmonious with our present curriculum, but which deal with those conditions and facts and developments which come after the limit of advancement for the mere bookkeeper has been passed, when he has advanced into the higher managerial and more responsible relations of business life, not to mention the widening horizon of his social duties and responsibilities.

The mechanical and trade schools, which were first organized to teach the trades, have almost without exception already outgrown the limits of their original purpose. In the schools for bricklaying, carpentry, and

the lower order of trade schools, courses of study have been added to prepare the young man so that, when he becomes master builder and contractor, he can intelligently proceed with his business. Schools of carpentry have their departments of architectural drawing and mathematics. The electrical school has its department of structural and mechanical drawing and engineering, with the accompanying mathematical branches. Schools of technology and polytechnic institutions are in most cases vast scientific laboratories and workshops, dealing not only with material trades, but instructing in every department of the physical sciences.

Is there no future for business schools beyond the teaching of book-keeping? Are not the subjects of higher business law and calculations, practical economics, finance, the science of government and taxation, the duties of citizenship, all harmonious and analogous, and in natural sequence to the more technical training now received, which shall come in full play later in the lives of those who come to us? Even so indefinite and general a subject as ethics, as applied to the business and social life, is worthy of our careful consideration and presentation. As teachers and members of society we are bound to recognize the responsibilities of our position, and take our place manfully in the warfare against the ignorance and the social and political evils of our time. We are, in a sense, public servants, and as such we cannot close our eyes to the conditions as they exist.

I am fully persuaded that, if business schools are to keep pace with contemporary education and maintain a place and prestige, it must be along the lines pointing towards the liberal, in the introduction of such branches of science and philosophy as are in progressive touch with present subjects, but which will provide a mental discipline and a rational character growth far beyond that which is but incipient in technical subjects, and the maintaining of courses of instruction that will produce men of broader intelligence, riper and weightier powers and judgments than are supplied in a training that is purely technical.

The attendance of perhaps one hundred thousand young men and women under our instruction yearly, who in coming generations must, through themselves and posterity, place the seal of success or failure upon government by the people, who must assume the responsibilities of citizenship and society, and whose preparation to solve the weighty problems of governmental policy, finance, and taxation, must come from us or not at all, make our duty and responsibility clear. Surely utter extinction shall be the deserved punishment, the punishment to fit the crime, if the business school fails to respond to these intellectual and moral demands which are laid upon us.

Quoting from an eminent educator and writer: "It cannot but be manifest to every thoughtful observer that one of the most discouraging

signs of the times is the want of honest thinking and practical common sense which is daily exhibited in high places and in low, in the rulers of nations, the dispensers of law, the managers of great enterprises, and so on, down to the political 'boss,' or, if there be a lower level, the politician of the saloon.

"Trickery and juggling with words in absolute disregard of facts, plausible expressions disguising well-known facts, and the disposition to build up inequitable technicalities, in defiance of the most manifest principles of right and wrong, are the things which give daily support to the views of the anarchist who regards all law, order, and government with hatred, and is pleased to see their representatives discredit themselves and bring daily distress and alarm to those who would fain believe in an advancing evolution of the human race, and the millennium in even the far-distant future."

That there are numerous and stubborn obstacles and difficulties in the way of widening the curriculum of the business school in the direction of the liberal is fully appreciated and freely acknowledged. The principal difficulty has been of our own making, and lies in the impatience of the average student to reach the practical and to secure a position, and his unwillingness to give the necessary time and attention to those lines of study which do not bear directly upon the subject of book-keeping. We cannot expect the immature youth, whose ears are filled from all quarters with the importance of practice and the depreciation of theory, and whose ambition is to earn his first dollar, to appreciate the value of a well-rounded education, or to understand the advantages which will later come to him from their acquirement.

This difficulty can only be overcome by continuous, patient, and combined efforts on the part of the entire commercial teaching fraternity in the education of the people to a right understanding of the importance of this broader education. We must first submit to the rather humiliating process of tearing down that which we first built, and the rebuilding process will be long and tedious and attended with difficulty, but that it is our only salvation is beyond question, and is a necessity that must be met valiantly and with courage.

The first person against whom we must bring our arguments and persuasions is the pessimist, the man who, himself being without the more liberal education, is apt to underestimate its value. He takes shape in various forms. He is recognized in the three-months' course school; the school that guarantees positions; the school that always prints Professor before the name of the principal and every teacher in the faculty; the school that starts in with a great flourish and closes in six months, leaving behind an unsavory record of financial and moral irresponsibility; the school that permits its students to elect what they shall study irrespec-

tive of their needs, and grants diplomas to all comers ; to say nothing of the milder form of lobster-progression which insists upon pounding on the same last our forefathers used forty years ago. These good people are not pessimists in their own eyes, but they are dead weights to the cause of higher education, and millstones on the neck of educational progress.

Conservatism is the hoar-frost to educational advancement. While great strides of advancement are taking place in the industrial and commercial world, to the extent that they have almost revolutionized pre-existing theories of economics and of sociology, the educational world has been retarded by the ancient traditions, and the scholastic exclusiveness, and the reverential mental attitude of teachers and savants toward the spirit of established precedent.

Because of the limitations placed upon me, I have made no attempt to discuss in detail the particular branches named in my subject ; what they are and the ground they cover is generally well known and understood. If these subjects are closely allied and come within the proper functions of the business school, as I have attempted to show, the question of importance is how they may be introduced into our courses of study without serious disarrangement of present conditions, without taking on the features of an innovation, and still secure more and more to our students the benefits which shall certainly come from their consideration.

One difficulty which must first be overcome is the lack of suitable texts, designed with special reference to the intelligence of our students, stripped of all purely scientific phraseology, with the subject-matter so bright that it shall attract and hold the attention and interest of the student. Until this deficiency is supplied, the individual teacher must be depended upon to furnish the information and secure the interest of his pupil.

In presenting these subjects, the method should be by demonstration as far as possible, rather than by mere precept. Practical economics can be made a most interesting and attractive subject ; it deals with things about us, with conditions and facts that the student of average intelligence can comprehend and appreciate. It opens up to him new fields of investigation, new thoughts. It presents new views of things as to his material and social surroundings.

In inculcating the duties of citizenship, a mere reading of and familiarity with civil government are not sufficient. The instruction must deal with the responsibilities of the individual to his government and the reciprocal relations existing. He must be made to feel his responsibilities as a voter, and that he must perform his integral part in conducting the affairs of a true democracy with intelligence and judgment. He must be impressed with the importance of political integrity and fair dealing.

As to the purely commercial laws, we are now well supplied with suitable texts, but for the presentation of the moral laws and ethics of business we must depend at present upon long and laborious essays and discussions; at least we have no clear-cut and readable text that would prove interesting and attractive, and at the same time suitable to the mental advancement of our students.

One most important consideration is that we may have teachers who can teach. I refer not only to the subjects under immediate discussion, but to the purely commercial branches themselves. Teachers must know more than the subjects they teach. They should be encouraged toward original investigation, and should be required to keep themselves in close personal touch with the contemporary development of the times in their special lines of work. No teacher can produce the best results in the schoolroom who is not in closest and continuous touch with modern ideas and methods of business. Our teachers should be seen in countingrooms, in workshops, and in our industrial establishments of every kind and description, more frequently than they are.

Let the latent inspiration of the true teacher be re-enforced by a keen appreciation of the social and economic conditions at present existing, by a sense of his individual responsibilities as an instructor, by his love for his country, by his respect and loyalty to the spirit of our institutions, and, above all, by a continued effort in all the directions which tend to produce the highest unities for good in the whole man, and the suggestions and improvements advanced, looking to broader attainments and more liberal culture, shall cease to be possibilities and become accomplishments, and business education will continue to hold its present place in the ranks of useful education, and add new laurels to the escutcheon of its glory.

DEPARTMENT OF CHILD STUDY.

SECRETARY'S MINUTES.

FIRST SESSION.—THURSDAY, JULY 8.

In the absence of the President, Colonel F. W. Parker, of the Chicago Normal School, the meeting was called to order by Superintendent H. E. Kratz, of Sioux City, Ia., Vice-President of the department. The Secretary, Miss Schallenger, of Stanford University, being absent, C. P. Cary, of the Milwaukee State Normal School, was chosen secretary *pro tempore*.

Professor G. W. A. Luckey, University of Nebraska, presented a paper on "Practical Lines of Child Study for the Average Teacher." The paper was discussed by Superintendent A. K. Whitcomb, Lowell, Mass.

Dr. Reuben Post Halleck, of Louisville, Ky., read a paper on "The Bearings of the Laws of Cerebral Development and Modification on Child Study." Professor M. V. O'Shea, University of Buffalo, followed in discussion.

Dr. Colin A. Scott, Chicago Normal School, read a paper on "The Psychology of Puberty and Adolescence." Discussion was led by President A. H. Yoder, Vincennes University, Ind.

The following Committee on Nominations was appointed :

L. H. Galbreath, Normal, Ill.
Jenny B. Merrill, New York, N. Y.
J. J. McConnell, Iowa City, Ia.

SECOND SESSION.—FRIDAY, JULY 9.

Superintendent John A. Hancock, Durango, Colo., read a paper on "Mental Differences of the Boys and Girls in the Public Schools." Discussion by Superintendent S. S. Parr, St. Cloud, Minn.

The subject, "Parents as Child Students," was presented by Mrs. Mary Coddington Bourland, Vice-President I. F. W. C., Pontiac, Ill. Discussion by Dr. Jenny B. Merrill, New York city.

Dr. John Dewey, University of Chicago, spoke on "Criticisms Wise and Otherwise on Modern Child Study." Discussion was led by Dr. B. A. Hinsdale, University of Michigan.

Dr. C. C. Van Liew, Normal, Ill., spoke on "A National Society for Child Study."

The report of the Committee on a National Organization for Child Study was presented by G. W. A. Luckey, the chairman, as follows :

The committee appointed by this department at the Buffalo meeting last year, to consider the organization of a national society for child study, begs to submit the following report :

We recommend the organization of a national academy of scientific pedagogy, the membership to consist of two classes, active and honorary; the active membership to be open to all who are interested in the subject on approval of their names by the executive committee and payment of an annual fee of two dollars. Active members have the privilege of attending the meetings and receive all the publications of the academy. Honorary members shall be elected by the council and shall pay \$25, thereby becoming life members. The direction of the academy shall be vested in a council, whose members must each have made some published

contribution of scientific value in this field. Honorary members shall also be members of the council. Members of the council shall be elected from the active members and shall pay the active members' fee.

The meetings of the council and of the academy shall be held annually in connection with the meetings of the National Educational Association. All active members shall have the right to attend meetings of the council, but not to participate therein. The council shall elect an editorial committee, composed of six members and an editor-in-chief. This editorial committee shall have entire charge of the publications of the academy, with power to make such business arrangements as may be necessary. We recommend the appointment of a committee to draw up a constitution along the lines of this report, and to select, upon the basis of published work submitted to it, members of the council, not to exceed twenty-five in number. We nominate as such committee the following: G. Stanley Hall, Wm. L. Bryan, John Dewey, Earl Barnes, and C. C. Van Liew.

G. W. A. LUCKEY,
C. H. THURBER,
Committee.

The report of the committee was accepted and laid upon the table for future discussion.

The Committee on Nominations made the following report:

For *President*, M. V. O'Shea, Madison, Wis.
For *Vice-President*, Miss Sarah A. Stewart, Milwaukee, Wis.
For *Secretary*, G. W. A. Luckey, Lincoln, Neb.

The department then adjourned.

C. P. CARY,
Secretary pro tempore.

PAPERS AND DISCUSSIONS.

PRACTICAL LINES OF CHILD STUDY FOR THE AVERAGE TEACHER.

BY PROFESSOR G. W. A. LUCKEY, UNIVERSITY OF NEBRASKA.

Different as may be our definitions of the word "practical," I believe that in general we will agree that everything which aids in making the individual a stronger and better teacher, without in any way injuring self or others, is practical.

The term "average teacher" is more difficult to dispose of. I shall use this term to include that large body of teachers generally known as the rank and file, whom I shall designate as average teachers, not on account of lack of ability or efficiency, but on account of numbers. To this class belongs the great bulk of the teachers; from this class are to issue the leading educators of the future, and upon this class we must depend in a large measure for the direct execution of all that is good in education.

As you are aware, the child-study movement is still in its infancy. It has spread with a surprising rapidity, and has been received with unexpected enthusiasm, and yet its meaning is only partially understood by the great body of educators. To many the movement seems to be limited

to the study of infants, or, at most, to children in the primary grades. On this point Professor Earl Barnes says: "The term child study is unfortunate in seeming to be limited to the period of infancy. The new movement felt all over our country today is much wider than this. It is nothing less than a direct, inductive, quantitative study of the natural history of human beings." It is this broader meaning of the word that is accepted by every true student of childhood, be he philosopher, scientist, teacher, or parent.

One of the main purposes of child study is to know man better, and this makes it necessary to study, not only his beginning, but his growth, maturity, and final decay. The extent and importance of this movement become the more apparent when we appreciate the fact that the one subject from which all others radiate, and into which all will finally concentrate, is the study of humanity.

The spirit of this movement is the same scientific spirit which is causing such radical changes in the teaching of history, literature, language, science, etc., and is attributable to the scientific age in which we are now living. In all these studies the thought seems to be in the direction of a better understanding of human nature, and means another step in the progress toward a scientific pedagogy.

In its broadest sense child study is limited to no age or class of individuals, but covers with equal importance the whole field of education. It includes not only the studies carried on to increase our knowledge of the child, but also the systematic effort made to adapt the various courses of study to the individual needs of the children.

The methods pursued in child study vary greatly, depending largely upon the opportunity and purposes of the persons using them. They include, in the first place, the many undirected observations of parents, teachers, and others as the results of direct contact with children. In this way considerable knowledge of childhood has been gained, without a thought of its having anything to do with child study. But the greatest difficulty with this aimless method is its lack of system and purpose; besides, the knowledge gained is usually of such an incoherent character that it cannot be imparted with value to others. Most of our dealing with children is a matter of experiment; and, unwise as many of these experiments prove to be, they would not seem so disappointing if the results could be so utilized as to make the repetition of the experiment unnecessary.

In the second place, we have the method of systematic observation, which is frequently spoken of as the normal method, on account of its more common use in normal schools. According to this method the student is directed to make careful observations of the various activities of children, the main object being to direct the attention of the student

to the personality of the child, and to enable her to give accurate pen pictures of what she sees. This method varies, of course, with the advancement of the student from the mere recording of a single observation to a careful study of many observations. It is one of the best methods for the teacher, as it requires but little preparation, and offers an opportunity for much valuable study of children without in any way attracting their attention. It brings the teacher into close contact with the child, increases her sympathy for children, and leads her to a better understanding and appreciation of their individuality.

Somewhat allied to the above method of observation, though usually much more intensive, is the method used so successfully by Taine, Darwin, Preyer, Miss Shinn, Mrs. Hall, and others, in which the various activities of a single child are carefully observed and recorded, and, perhaps, conclusions reached regarding the order of development. The observations generally extend over several years, and, to be valuable to others, require much intelligence and patience on the part of the investigator. The importance of this plan of study is apparent, but, owing to the necessity of frequent access to the child and the sympathetic relation which must exist between the observed and the observer, this method seems to be more particularly adapted to the use of intelligent parents.

The next step leads us to the experimental method, which consists of an extended series of experiments with specially devised apparatus on a few or many children, varying in age, sex, etc. Such problems as attention, memory span, reaction time, sensibility, fatigue, etc., are considered, and the material used for comparative study. This method differs from that of mere observation in that we are here able to control the conditions under which the material is obtained, and the results, therefore, will be more definite and accurate. But on account of the possible danger to children of ill-advised experiments, this method belongs more properly to the specialist and should be used with caution. There is one form of experimentation, however, covering arrangement of school buildings, courses of study, hours of work, effect of play, health of children, etc., that every teacher can carry on with profit to the children as well as to herself.

Another method worthy of mention is the one used with such promise in many fields of investigation, especially in such subjects as social and political science, economics, etc. It is known as the statistical method, and consists in gathering data under similar conditions from thousands of persons, differing in age, sex, nationality, environment, etc. The material is usually obtained by sending out carefully prepared syllabi, covering single traits, like anger, fear, play, ambition, interest in nature, etc., to a number of collaborators who are interested in collecting and returning data upon the subjects desired. This material is then collated

in the hope of determining, through large averages, some basic principles for guidance in future actions.

This method, as will be seen, is of great service in mapping out general tendencies, and in preparing the way for more specific studies to follow later on. It is also important in giving us the consensus of opinions on the various subjects under consideration. Its chief value, however, depends upon the importance and workableness of the problem which the syllabus covers, and upon the amount and uniformity of the material obtained. Under the skillful direction of Dr. G. Stanley Hall or Professor Earl Barnes, this method has produced some of the most valuable literature on the subject of child study. It has also been used with much profit by many a superintendent and teacher in determining some of the leading characteristics of the children in their immediate vicinity.

The personal reminiscences of a class of adults, covering what remains of their early feelings and experiences, will be found of great aid in suggesting suitable syllabi for use in the statistical method. Besides, such study brings us into closer sympathy with child life and furnishes us with the most important means of correctly interpreting the feelings and actions of others. The farther the individual is removed from his early experience, the more difficult it is for him to come into touch and sympathy with childhood. Woman, being the more stable element in the development of the race and less removed from her early ideas and feelings, becomes the truest interpreter and the best guide of children. Live over again in reminiscences your early experiences, if you would become a great teacher of the young.

The above methods, either singly or in combination, represent fairly well the more common ones now in use. A more complete description of them, including others, is to be found in the *Northwestern Journal of Education*, July, 1896, and in the first number of the "Studies in Education," by Professor Earl Barnes.

Most, if not all, of these methods should become familiar to every teacher, not simply through reading about them, but by actual experience with them, and yet the method used in the study of children is of far less importance than the interest, sympathy, intelligence, and persistence which the teacher brings to the work.

Many highly important lessons may be gained from the naturalist in his study of plants or of animals, and yet, for the most part, the study of children is far more complex and requires a higher degree of skill.

No one would hesitate to destroy a plant for the sake of knowledge, and even the life of an animal is usually held as a secondary consideration; but how different with the child! Here every investigation should have for its purpose the present as well as the future welfare of the individual,

and the work must always be carried on with the greatest care in order to avoid any possible injury.

Admitting that child study is encompassed with many difficulties, it is nevertheless within the ready reach of every teacher and promises greater returns for the effort than any other subject.

Owing to individual differences and the effect of local environment, it is difficult to point out specifically the more practical lines of child study. Under suitable conditions any phase of child study will be found practical; and especially so if it increases our knowledge and appreciation of children. Whatever stimulates the teacher to originality of thought and enables her to become a real student is practical. For it is in this field, above all others, that teachers are weak. The many details of the profession and the way in which these have been worked out for us in textbooks and periodicals seem to mitigate against real growth and independence of thought. How proportionally few real investigators are found among the rank and file of teachers! The world has come to recognize this weakness and seldom calls upon the teacher for advice pertaining to matters outside of the schoolroom. How different with the lawyer, who is compelled to gather his evidence each time from the sources, sift and arrange it, and make out his own case, upon which he is to win or lose! In this way he grows with every case he handles and becomes one of the leading citizens of the community.

Everything which discourages true growth and originality in teachers is wrong, whether it be school board, superintendent, or periodical. Do not misunderstand me; mere dogmatism is not originality, but the reverse. If you have discovered a new fact, you will always be able to make it clear to others by sufficient proof.

I wish to mention here a second weakness, which is doubtless familiar to you all, and which is due, perhaps, to the many demands made upon the teacher's time. It is the desire to get information quickly—the short cuts to knowledge. In our summer schools and university classes teachers become very impatient when placed in the libraries or laboratories to do *intensive* work. They seem to feel that this is a great waste of time, and wish rather to do *extensive* work, in order to get a general idea of all the subjects. Everyone knows how such work destroys the student spirit and undermines the real power of the teacher.

The child-study movement seems to offer an opportunity of overcoming both of these difficulties, unless we make the grave mistake, which now seems probable, of studying children through books. With children all about us—in our very homes and companionship—if we must go to second-hand sources to become acquainted with them, I pity the profession. Monitors we are, and monitors we remain.

I always feel like retorting when the statement is made that teachers

are unable to do scientific work. What are they able to do? It is true that the teacher is interested in child study more from the standpoint of its direct application to the problems of education; nevertheless, he knows that before a fact can be applied it must be known; and we all know that anyone who is able to make accurate observations and classify them with reference to some leading feature is able to do scientific work.

To the average teacher, then, I would say, begin the study of children by selecting some topic closely associated with your school work, and in which you are especially interested. We will assume that you have selected as a topic "Children's Interests in Nature." You will now need a good notebook, or, better still, loose sheets of paper, which can be arranged and rearranged according to convenience and bound later into a volume. Some evening, when all is quiet, write out carefully your own recollections of interest in nature; get some of your friends to do likewise. Then make a careful record of all the facts you possess regarding the children's interests in nature; after which begin to note from day to day any new facts that occur to you. Go with the children, whenever convenient, on long walks and observe the nature of their interest. Do not fail to keep a complete record, though you may often wish to change former statements. The mutual help of other teachers or of the superintendent will be found a great aid in this work; nevertheless, if you have a fair amount of courage and persistence, you need not hesitate to pursue the work alone. You have by this time become familiar with much of the literature upon the subject, and are ready to arrange a simple list of questions to be answered by your own and other children. Compare the information obtained in this way with what you have gained by observation. If possible, get hold of the best investigations on the subject, which you will now be able to read with intelligence and appreciation. Compare these with your own studies. I need not say more, for when you have done this, you will have passed out of the class to whom I am speaking. It may have required several years, but you have been happy in your work and have been growing all the time. There are other steps in the process, but you have already learned to walk.

Child study, to be the most helpful to the teacher, must be closely connected with the daily lessons and duties, and yet it should have enough additional material and thought to give interest and life, and enable the teacher to become more and more efficient. We should not forget that it is not what we read and hear, valuable as that may be, but what we think and do, that gives us strength and character. We should read the literature, by all means, but, more than that, we should digest and classify it, using it to strengthen and broaden our ideas, or to weaken and modify our views.

Among the more practical subjects for the present I should place:

The physical development of the child, including food, health, defects, and remedies; exercise, and the sanitary condition of school buildings; influences at work in the formation of character; discipline and punishment; the proper use to be made of the play instinct and motor activity; children's interests in the various subjects of study, in outside work or play, and their bearing on education; peculiar and exceptional children; children's forms of expression, language, drawing, writing, etc.; fatigue and the proper arrangement of studies. All these subjects, and many more, will be found practical in any community where the teachers are imbued with the progressive spirit.

DISCUSSION.

SUPERINTENDENT A. K. WHITCOMB, Lowell, Mass. — The limitations of this question, as I am permitted to discuss it, take it wholly out of the fascinating realm of speculation and reduce it to the severely practical. I am not permitted even to try to advance anything new, but only to select from things already known those simple enough and practical enough to be of use to every teacher.

The ability to understand one's pupils, to enter sympathetically into their thoughts and feelings, is a factor of unsurpassed importance in the success of any teacher, and anything which helps to such knowledge is legitimate child study, and anything which does not may be of interest to the scientist, but has, in my opinion, no place in the work of the average teacher. What, then, may and should be done?

First, in addition to the constant, though half-unconscious, observation of individual pupils, there is room for a little conscious and systematic study, which can best be made through language exercises, planned to secure such unconscious revelation of the pupil's opinions, feelings, motives, etc., as shall be of most value to the teacher. Questions as to things most desired, in the present or future, as to the book or author best liked, as to conduct under conditions which would test morals, etc., provide an unsurpassed basis for language exercises, and, at the same time, often afford an insight into character helpful in the highest degree. Anything answering to this touchstone is legitimate and desirable; anything which does not is out of place.

Second, all teachers who really observe cause and effect have noticed that badness of deportment is very apt to accompany backwardness in school work. The boy who is behind all his mates rarely loves school or lies awake nights trying to think how he may please his teacher. But it is only within recent times that most of us have learned that dullness in a very large proportion of cases is the result of some physical defect, usually of sight or hearing, so that not only health and mental development, but character itself — everything, in fact, which makes school life, or any other life for that matter, worth living — not unfrequently hinges on some such frequently unsuspected defect. Extended tests in this country and in Europe have shown that not less than 25 per cent. of school children are seriously limited in this way, and the study of such defectives is not only legitimate, but an imperative obligation. And, happily, the task is not a hard one, but a simple one. Test cards for vision may be obtained from any oculist for a few cents, and hearing may be tested by anyone who owns a watch. There is, therefore, no excuse for ignorance on this point, and when the defect is known it is often easy to interest parents in its mitiga-

tion or cure, to the inestimable benefit of the pupil, while in school the beneficial use which may be made of such knowledge is too obvious to need discussion. Child study in these two lines, then, is not only practical and easy, but is the duty of every teacher.

THE BEARINGS OF THE LAWS OF CEREBRAL DEVELOPMENT AND MODIFICATION ON CHILD STUDY.

BY DR. REUBEN POST HALLECK, LOUISVILLE, KY.

If undeveloped cells and connective fibers are frequently found in adult brains, the question how to secure fuller cerebral development in children becomes one of paramount importance.

From the point of view of the educator we must insist on a three-fold brain development. First, there must be sensory development before we can gain knowledge of anything in the outside world. Second, the motor tracts must receive proper training, for in this world things are obtained only through action. Third, the exercise should be such as to develop the connective brain fibers. A brain will be imperfect in proportion as any one of these types of training is neglected.

First, the proper sensory exercise is a necessary prerequisite, not only for the development of the sensory cells, but also for the development of motor cells and of the fibers connecting sensory and motor cells. Whenever a sensory stimulus flows into a cell, that cell is exercised and modified. That modification will tend to persist and will afford the physical basis for memory of the thing. No exception has yet been found to the general rule that the right kind of exercise tends to develop any growing organism, and that the neglect of that exercise tends to dwarf it.

We have some positive proof toward establishing this position with reference to sensory cells. Comparative anatomy shows that when exercise is withheld from any part of the brain, that part tends to decline in size or complexity, or to atrophy. An examination of the brains of the blind has shown that the occipital lobes are imperfectly developed. We have also experimented with young animals by depriving them of certain sensory stimuli. When the optic nerves have been cut at birth, the visual sensory cells have atrophied.

It ought to become a part of the creed of every teacher to see that *all* the sensory brain tracts of every child have full normal exercise, not only the visual and auditory tracts, but also the muscular, tactile, olfactory, and gustatory centers. If the city cannot furnish sense stimuli of the right kind, some provision should be made for taking children into the country, if only for one day in the year. I have dwelt elsewhere at

considerable length on the development of sensory tracts, and I have not the time to give full practical directions here.¹

Before leaving this subject, however, I must emphasize the fact that the study of words as such, whether Greek, Latin, or English words, is responsible for untold sensory and motor paralysis. In a lecture before teachers I once asked them how many had used the word "lurid." All replied in the affirmative. I then requested them to write on paper the name of some natural object of a lurid color and to state exactly what the color was. Only 5 per cent. answered correctly. Here was 95 per cent. of the teachers of the young using a word without any definite knowledge of what it meant. "Lurid" was always coupled in their mind either with a wrong signification, or it meant nothing more than a Choc-taw term.

Such instances illustrate the old method of teaching words without having the pupil at once translate them into the proper definite sensory or motor experiences. The teacher ought to make a practice of accustoming herself, as well as her pupil, to translate every possible word into the sensory or motor experience for which the word ought to stand. Shakespeare took special pains to show his contempt for mere wordy learning, in "Love's Labour Lost," and in the caricature of the school-master in the "Merry Wives of Windsor." Shakespeare fortunately left school in the early part of his teens, before such "book-learning" could cause the atrophy of his sensory and motor brain tracts, and before he became a practical illustration of the statement of Professor Jowett, Master of Balliol, that "education is the grave of the mind." In reply to the question of Polonius, "What do you read, my lord?" Shakespeare makes his masterly inactive character reply: "Words, words, words." The master in his inmost soul must have felt the special aptness of this reply.²

We must next turn our attention to the development of the child's motor cells. The education of these must keep equal pace with sensory training. Let it be distinctly understood that a sensation never exists as an end in itself. We secure things only through action. If a sensation does not lead to action, either immediate or remote, the sensation is worthless. That education which divorces ideas from action is a curse.

Motor cells are exercised through action. Fortunately the world is a text-book of action. Every time a step is taken, a gesture made, a morsel carried to the mouth, a letter written, a word pronounced, a game played—in short, any action indulged in—the result is modification of motor

¹ Halleck's "Education of the Central Nervous System," The Macmillan Co., chaps. vii., viii., ix., x.

² See "Education of the Central Nervous System," chap. x., "How Shakespeare's Senses Were Trained."

cells and a tendency to repeat the same action in the same way. We can formulate some practical rules for motor education: First, for full motor development, see that children early in life perform correct movements in as many varied ways as possible. If the vocal chords do not move correctly before the age of ten, the child will mispronounce for life.

A second important rule may be thus formulated: See that the first movements are correct, for they are accompanied with material brain modification, which will for all future time tend toward automatic and unconscious reproduction of those movements. Our friends must tell us when we mispronounce or leave our knives and forks in wrong positions on our plates, for we are unconscious of the actions. The vital time for motor training is before the age of eight. What shall we say of those parents who leave their children during this most important age to be cared for chiefly by a nurse? The children by imitation unconsciously absorb her bad pronunciation, grammar, and uncouth manners. It is as difficult to get rid of the cerebral motor modification corresponding to these mistakes as it is to remove traces of a crease in a good article of paper. Alas for the most of us that we carry around mistakes ready-made in our nervous systems! Alas that so few of us are automatically, habitually, unconsciously right as a result of early molecular bias in brain cells! Every time that we have to think whether our pronunciation is correct, whether our grammar is accurate, there is just so much energy subtracted from the thought, and we are slaves to this lower order of things. If we give our children their birthright, we shall make them motor automatons, reacting unconsciously, and certainly right, when confronted with these petty details. Then, and only then, can they forge ahead in the world of thought, having all their attention free for higher things.

A third rule may be thus given: See that a child is not allowed to make an exception in motor reactions, which should always be of the same kind in forming habits. For certainty of action, the molecular modification in the cell must be invariable, or a new and distracting neural pathway will be formed. The sight of a thing out of its place must be followed by the movement necessary to replace the article. The pronunciation of the word "buoy" must be of the same correct type every time, until the pronunciation takes care of itself. The way to ruin a young child or a young dog is to allow it to react one way to a certain sensation today and another way tomorrow.

There is a fourth rule, which many are violating: Do not allow children to indulge in motor specialization too young. Do not allow them to restrict themselves mainly to one line of movements. This early over-habituating in any one direction leads to blocking neural pathways in other directions. This position must be maintained in opposition to

those who hold that we ought early to find out a child's natural bent, for the purpose of allowing his chief activities to take that direction. It may be that a certain child is fitted for the study of medicine, but I protest against following the advice of some to its logical conclusion and putting that child to studying the *materia medica* at the age of five. He should first be broadly developed. I do not wish him to doctor me, if he is thus early allowed to narrow himself and to block other pathways of activity. Preyer rightly says: "The more that certain nerve paths have been made easily passable by frequent repetition of movements, the greater will be the resistance to the combinations of these with others, and to the employment of isolated tracts."

A fifth rule for motor development ought also to be impressed on teachers: Normal motor development can only follow full sensory training. Sensations naturally lead to movement. Contrast the case of a child brought up in the bare back yard of a tenement with one reared in the country. A butterfly flits by the country child, and he chases it. The sensation has led to movement. He sees a bird's nest or cherries on a tree, and straightway climbs it. The back yard is poor in sensations which lead to varied movement. Many valedictorians have failed in life because they divorced sensations and ideas from movements. Many a one who stood at the other end of the class has known far less, but his motor cells have been trained to act with reference to what little he did know, and he has succeeded where the valedictorian failed.

We pass next to one of the least discussed, though one of the most important, modifications of the brain, the development of connective fibers. Physiologists generally agree that these form the physical basis for the association of ideas and for thinking. We know that the infant cannot at birth associate the sensations from the different senses. We know that the various sensory tracts are at this time much like unconnected islands in a lake, that the fibers which bind these tracts together have not yet, to any great extent, developed and become functional. We further know that these fibers develop in number until about the age of thirty-three. Many teachers err in trying to make children reason out of proper proportion to the development of the fibers, and beyond what the knitting together of different brain tracts will allow.

Let it be remembered that these fibers are in every case the outgrowth of nerve cells. The outgrowth and development of the various types of nerve fibers constitute the most marked quantitative changes in any brain from birth to maturity. The tangential fibers are those which run parallel to the cortex of the brain, and which connect the various convolutions. Without such connective fibers, it is plain that the sensations registered in different parts of the brain could not be fused into a whole. A peach seen could never be identified with a peach tasted or

a peach touched. The same objects, when presented to us by different senses, would be as different and as incapable of association as a fish and a clap of thunder. We might argue in advance of dissection that these connective fibers would exist. Actual dissection has shown that they connect directly or indirectly every part of the brain.

It is important for teachers to remember (1) that connective brain fibers are undeveloped at birth; (2) that they increase in number until about the age of thirty-three; (3) that the most striking probable increase occurs during adolescence; (4) that many of them develop a medullary sheath, which is, in some unknown way, supposed to be necessary to render the fibers perfect for their work; (5) that they are as much the outgrowth of nerve cells as branches are the outgrowth of trees; (6) that it is only reasonable to suppose that whatever form of exercise tends toward the growth and training of the cell will also tend to develop the outgrowing fibers; (7) that, so far as we know, the brain has no other means of connection, no other physical substrate for the associating process necessary in thinking.

Vulpus actually counted, in various limited tracts in many human brains, the number of medullated tangential fibers. The area in which he counted these fibers was .036 square millimeters. He divided the cortex into three layers, an outer, middle, and inner. In the inner layer of the first frontal convolution of a child of sixteen months he found 10 of these fibers in the area of .036 square millimeters. The same area in a man of thirty-three furnished 80 fibers, an increase of 700 per cent. This area in the occipital lobe—the sensory tract for sight—had 70 of these fibers in a child of sixteen months. The same tract in the man of thirty-three contained 150, an increase of 114 per cent. The middle and outer cortical layers of the child's occipital lobe counted only about 5 fibers each for this area. In the man of thirty-three the middle layer of the corresponding tract had 20 fibers, the outer layer 70, an increase of 300 and 1,300 per cent. respectively.¹

No areas thus far reported have shown an increase in the number of fibers after the age of thirty-three. In some tracts a decrease begins soon after that time. This phase of the subject has important bearings on thought and movement. The best time for vigorous brain action is before the noonday of life.

If I am asked what definite steps to take to further the development of these fibers, I may reply that I consider the question to be principally one of judicious exercise and nutrition. Let us summarize the following steps: (1) These fibers are the outgrowth of sensory and motor cells. (2) Undeveloped cells do not have these fibers. (3) Outgrowths, whether

¹ For the chart summarizing these results, see Halleck's "Education of the Central Nervous System," p. 57.

in a tree or a nerve cell, are accompanied by an expenditure of energy. It is, therefore, necessary to have sensory and motor cells with a surplus of energy. (4) When sensations stream into a sensory cell, it is set into a state of activity, and its actual bulk is thereby reduced. As a consequence, more blood, laden with nutritive matter, goes to the cell. Now, the cell has, by this exercise, been put in the best possible condition for assimilating more nutriment, and, consequently, of storing more energy. Precisely the same is true of a motor cell. This accumulated energy may take several directions; a part may be employed in retaining the physical disposition caused by the sensation or the movement, in other words, in maintaining the physical basis for memories of sensation and movement, and another part of this energy may be used in furthering the growth of nerve fibers. An inactive child may sit down to a table loaded with food and have little appetite or power of assimilation. Let that same child be judiciously exercised, and these powers will increase. There may be nutriment in the blood, but the cell may not have been exercised so as to be put in the best condition for requiring and assimilating this nutriment. As a precedent step to developing these fibers of association, let the sensory and motor cells have full exercise.

Use the brain judiciously, and it will develop; neglect the use of any part, and it will tend to atrophy.

The opinion of the famous German physician, Dr. Edinger, should be remembered in this connection. He says: "There is great probability that this development of medullated nerve fibers continues for many years, and that new nerve tracts are continually developed as new regions of the cortex are brought into activity."

A study of the development of these association fibers affords some practical suggestions to the teacher. Do not try to develop the power of thinking faster than the brain furnishes the physical substratum. Many children are tortured with studies which require a philosophical comprehension of cause and effect and of process. A miracle would have to be wrought in these childish brains before they could understand those things. The child's brain is thus doubly misused. While plastic, it ought to be storing away motor and sensory modifications, and a wide range of memories which will be food for future thought, when the time for abstract thinking comes. Some insist that the storehouse of the brain shall be kept empty until the child can philosophize about these acquisitions. Then, instead of having full stores to think about, it must waste valuable time in securing these with a less plastic brain. Mere acquisition would have been a thousand fold easier then, thinking will be a thousand fold easier later. Sir Walter Scott says that he, early in life, acquired myriad facts, without any deep thought relations between them. He says he was then like a man with a splendid hand of cards, who did

not know their value or how to play them. When the proper time came, he learned how to play them, and he had the cards to play. Some teachers would have insisted on getting no cards until the philosophy of the game was understood, and then there would have been no cards with which to play.¹

My study of the brain has led me to believe that the thinking power will take care of itself better than the sensory and the motor functions; that, if these are trained aright, the child will naturally think right. I do not believe that any child can, by any educator, be forced to think broadly in advance of the proper cerebral development. When I remember the torture that the study of arithmetic caused me when I was a poor little helpless child, my blood boils. I could not understand the processes, and I lay awake at night with the shadow of their horror over me. I thought I must necessarily be a fool, and I lay awake still longer and brooded over that. I carry the scars of that torture in my nervous system today. When I am quite ill and have a fever, I seem, in my troubled dreams, to be a helpless child again. In the morning I shall have to recite an arithmetic lesson and be responsible for the process. If De Quincy ever had an opium dream fraught with more horror, I pity him. Suddenly, at the age of fourteen and a half or fifteen, I could understand arithmetic, and then I was put to memorizing facts of history and to learning languages. I wish I could sue for damages the educational system under which I was reared.

Sometimes within three months we notice a marked change in the capacity of pupils to understand mathematics. It seems probable that this change is due to the development of connective fibers and to the further fact that the medullary sheath has taken the last step toward rendering the fibers capable of easily performing their functions. I believe that this hypothesis accounts for the fact that we may study a subject for a long time without seeming improvement. In this case it is probable either that new pathways are developing or existing pathways are being cleared up and rendered facile for association. When the pathways have developed, either *de novo* or along unused fibers, the connection seems very suddenly to spring into being, although there have been forces for a long time tending to complete the last span in the bridge or to remove obstructions. To put the process under still another figure, we may suppose that we may buy a new house, unconnected with a reservoir of water. Pipe must be laid before the water can flow into the house. This may take quite a period of time, during which not a drop makes its appearance in the house. We later turn a faucet, and the water suddenly flows. If we reflect, we shall see that the appearance of the water is

¹ See Halleck's "Psychology and Psychic Culture," chap. ix, "Thought Culture," p. 238.

merely the result of a long series of antecedent steps. In another case, we may buy an old house with the pipes already laid. No water will flow, for they are choked with rust. When they have been cleaned out, the water flows at once.

I further believe that an early effort to associate things by their most obvious relations only tends toward developing fibers and rendering them functional. But there must first be things to associate, and the proper things are sensory and motor experiences. I hope that what is already well-nigh certain will soon receive positive anatomical demonstration, namely, that every undeveloped sensory or motor tract is necessarily deficient in connective fibers. We do know that undeveloped cells or neuroblasts have no fibers running from them, and we are further sure that young and undeveloped frogs have more nerve cells than fibers, and that the fibers increase as the frog grows. We also know that the dominant sense tract of animals, the tract which is most exercised, has the most connective fibers running from it. Some authorities think these facts prove that undeveloped cells must be poorly connected with the rest of the brain, and we see no reason for disputing that conclusion.

Some one may ask: "Will not nature attend to the proper development of the sensory, motor, and connective brain functions, if teachers will give her the chance?" I reply that nature would attend to this, if pedagogues would let her, but they have for ages shown their determination to hinder her. There is a natural tendency in the child to exercise his sensory and motor cells aright. Why, then, are papers like this necessary? The answer is plain: simply because we will not let nature alone. We have thwarted her by taking her child and imprisoning him in great cities, where he cannot hear the song of the bird, the murmuring of the pine, or the laughter of the leaves; where he cannot inhale the odor of the wild flower or catch the aroma from fields of blossoming clover or new-mown hay. We have taken him where he cannot climb the fruit tree, the mow, or the straw stack; where he cannot chase the butterfly, search for the wild berry or the hidden nest. Instead of giving the child nature's magnificent sensory and motor text-book, we have shut him up in a barren schoolroom. We have taken all possible precautions to see that certain spots in his brain shall be permanently undeveloped. We have compelled him to pore over a book as barren of meaning to him as the Sahara is of flowers. We have put him to studying processes before he knows the thing on which the process hinges.

Nature knows that her children have the God-given faculty of inattention as a weapon against our unfit training. It is a pity that we can use a goad to make these cells yield energy which she commands them not to part with. She knows that under such treatment we often fatigue

them, so that they never regain their natural elasticity. She knows that we leave scars in the nervous systems of her little helpless ones.

Give nature more of a chance at her children, the same chance which she had at Shakespeare, and three-fourths of what we pedagogues say can be left unheeded.

DISCUSSION.

M. V. O'SHEA, University of Wisconsin. — Any discussion at the present time of the contributions of cerebral physiology to practical teaching must be more prophetic than historic. Recent investigation has reached some conclusions, however, that are suggestive to teachers, and the most important of these have been presented in Mr. Halleck's admirable paper, which may be briefly summarized as follows: The cortex of the brain is composed of many millions of cells which possess important powers that constitute the physical basis of education—to store energy; to put forth associative fibers which form connecting links with other cells, the physiological prerequisite for thinking; and to retain impressions made upon them, which constitute the organic bases of memory. Now, the points of interest to those who train children are, first, the conditions for healthful cell growth, and, second, the manner and order of the development of associations between them, which we may here consider to be of three kinds: between sensory and motor areas; between different sensory areas; and, lastly, associations between sensory centers, and the three special language centers, the heard, spoken, and written language centers, which occupy particular portions of the sensory and motor areas.

The first message which the laws of cerebral development convey to teachers today is, it seems to me, not so much that they should provide fewer opportunities for the child to think, but more opportunities for him to come in contact with concrete things through the senses; that is, that we should have more of nature study and literature and manual training in the school course. It is essential that this concrete work come early rather than late in the child's life, as Mr. Halleck says, for this is the period designed by nature for the gaining of sense impressions. If the appropriate stimulus is not supplied to developing centers at the proper time, they tend to atrophy, and they can never thereafter be fully awakened. And, as Donaldson says, the harm would not be so great if only particular centers were not aroused, but the associative fibers which pass these barren areas do not function so readily, and hence the power of thought is impeded.

In the growth of the brain the earliest and most important form of association seems to be between sensory and motor cells. It is satisfactorily shown by comparative biology that the brain has been evolved in the animal series to take charge of the muscular system. In order to accomplish its purpose, it needs, first, a sensory region to receive impulses from the world without, and, secondly, a motor region to react in some measure upon these stimuli. In all the lower forms of animal life this relation between the sensory and motor areas seems to be very close, sense stimulus issuing almost directly in action. In accordance with the principles of inheritance, the child first develops those characteristics which have been most fundamental in the animal series out of which he springs; and so, if we had no other evidence, we might safely infer that in the growth of the brain the association between sensory and motor areas would be most prominent at first. But studies in the laboratory and observation of child nature re-enforce the testimony of evolution.

Again, as the brain was evolved to take charge of the muscles, its health and vigor depend in large measure upon the fulfillment of its appropriate function. From the point of view of physiology the sensory areas of the brain exist in order to produce motor reactions. From the point of view of pedagogy all instruction should contribute to the determination of action or conduct. Pedagogy and physiology unite in asserting that all our teaching should have a motor aspect; that is, it should issue in conduct. If the child were left to himself, doubtless all instruction would so culminate, but if we place him in school and forbid him to react upon his impressions, we prevent nature taking her course. Such treatment is injurious to the child for two reasons: first, sensory stimulation without appropriate motor reaction dams up the energies of the brain to its own detriment; and, secondly, education divorced from the immediate determination of conduct has little influence upon the latter. We see, then, the necessity for putting all moral precepts into practice at the time of their inculcation, so that the appropriate motor expression may become fused with the moral idea, and may clarify and re-enforce it. One of the most serious defects in our educational system is that it does not provide a sufficient opportunity for suiting the deed to the word. There is too much talking and too little doing. Let us have our literature in schools dramatized from the earliest grades up; let ideas gained from whatever source be expressed through drawing, through manual training, and through gesture, as well as simply through the voice. In short, wherever possible, let suitable action follow upon, and thus become a counterpart of, our thoughts.

It is a fundamental law of association that two impressions received simultaneously or immediately following each other become associated together, as, for instance, the sight of a bell and its sound.

Herbert Spencer pointed out, some time ago, an important law of cerebral development: that too rapid organization tends to early cessation of growth; and modern physiology confirms this view. Precocity, in biological equivalents, means unusually rapid development of the associative activities in the brain, and this precludes normal increase in size of brain elements. But the size of brain cells determines the amount of energy which they can store, and the number of associative fibers which they can ultimately put forth. We should not, then, seek to hasten organization too rapidly by stimulating a child too highly in his early years. Here, again, the city child is at a great disadvantage, for his over-stimulative environment hastens maturity at the expense of the highest possible final development. There is a danger, too, that the primary grades in our schools will expect more work of young children than they can wisely undertake. Speaking generally, a child of six should not have over three hours' mental work a day, and no child in the elementary school should have over five.

This question has another aspect, for activity of brain cells depletes them of their energies, and, if sufficiently long continued, produces a condition of fatigue which is a hindrance to the development of a growing cell, and to the proper activity of one already matured. Exercise, not fatigue, is the law of cell growth. In general, it seems well proven that there is a tendency in all school work to keep children too long at their tasks, without sufficient rest periods after every twenty minutes' or a half hour's work at the most. Much finely co-ordinated work in the primary grades, since it makes demands upon areas of the brain not yet matured, fatigues very rapidly and is liable to produce functional disorders in the cells employed.

The most important field for physiological psychology in the future is to aid in ascertaining the growing point of the child at every stage of his development. Physiology already indicates that there is a time order in the development of the child's brain elements, and when any element is developing is the appropriate period for its training. We have cause for profound gratitude in the fact that nature has ordained that the child should indicate to us the appropriate materials and methods for his education, from the

earliest months to maturity. The physiologist says that the growing brain cells constrain the child to seek suitable stimuli for their awakening, and this seeking we call interest. Physiologically, interest is essential for proper nutrition, by which all mental development and activity are conditioned. And so, it seems, the great problem before us now is to determine the child's interests, and this is a rich field for both the psychologist and the teacher of biology and of pedagogy. It would be disheartening to the teacher if she had forever to wait upon the verdict of physiology to say what the growing point of her pupil is at any time; but she need not, for the child reveals it in his acceptance of certain kinds of instruction and his rejection of others. That which is suited to the proper development of the child will manifest itself in all those physical expressions which indicate happiness and healthful growth. That which is not adapted to promote natural growth will reveal its inappropriateness through contrary signs. It is most consoling, then, that physiology, on the one hand, and pedagogy and the sympathies of the human heart for childhood, on the other, unite in declaring that the highest mission of the teacher is to minister wisely to the child's native interests, and everyone may become an investigator in determining what these are.

THE PSYCHOLOGY OF PUBERTY AND ADOLESCENCE.

BY DR. COLIN A. SCOTT, CHICAGO NORMAL SCHOOL.

Puberty and adolescence are without doubt the most important period in the life history of a human being. The whole of childhood is directly related to this period. When the functions of sex are early matured, childhood is proportionately shortened. The lengthening of childhood and the increase of intellectual and moral development, the expansion of uplifting and educational forces, the increase of wealth, the lengthening of old age, which can be demonstrated as accompaniments or consequents of this phenomenon, are thus primarily correlated with the problem of sex. In the history of evolution a period of nonage or childhood comes in as an intercalation between birth and sexual maturity. To increase this intercalation is the aim of progress.

Many of the spontaneous activities and plays of childhood, both in man and the lower animals (*cf.* Groos, "Die Spiele der Thiere"), may be shown to be preparations for courting. Indeed, the whole of child life is a period when the individual gets ready to play his part in the transmission of life, primarily from a physical standpoint, and, secondarily, in all those radiations of love, virtue, courage, gentleness, moral and intellectual attractiveness, which go to make up what President Jordan calls "the care and culture of men," and which form the forces which every educator desires to further and expand.

The educator's task is to put the individual in possession of his complete heredity. Not to educate is to disinherit.

His complete heredity, I have said. But the sin of the present educa-

tion is to work on the most highly radiated portions, and to neglect the connection of these with the primary bases of life. To throw chips upon the surface and arrange them in certain patterns, and remain ignorant of the deep-sea currents which carry them along, is an excellent education for old maids.

A lack of physiological unity, various degrees of divided personality, are one result of such an education. The school life gets separated from the home life, from the business life, and from every other sort of life. The imagination gets separated from the actual. The soul gets separated from the body. The soul becomes cold and passionless, the body becomes dried up and unhealthy, or sets up for itself a coarse and degrading line of action.

A middle-aged, exemplary-mannered, and somewhat successful clergyman, whom I knew, used to refer to the sexual functions as "those lower necessities of our physical nature." It used to be said of a recent political leader in England that he was perfectly moral from the middle up.

Such segmented lives sap the very roots of progress. Millions of legally legitimate children spring from such lower necessities of our physical nature. Think of the ugly, soulless faces that haunt the streets of all our towns! Could they ever spring from the immortal kiss of all-desiring, all-deserving love?

All-desiring love, I say. For this is the love that demands everything: a background of nutrition and a healthy body; money and power, houses and lands, beauty, grace, and charm, intellectual strength and keenness, moral fineness and vigor, emotional depth and reach; and, finally, the ability to evolve and cause others to evolve, to accept oneself and others from nature as we are, as something which is not yet, but is to be, like Browning's "James Lee's Wife," who needed to love a man whom she could forgive, develop, and improve.

How shall we prevent this morbid segmentation—this division of life? How shall we obtain this physiological unity which is the condition and expression of both health and holiness?

Of the first importance is realization of the significance of the period of adolescence. An immense bulk of inherited capacity comes in before puberty, and it comes in in normal cases with very little conscious reference to sex or sexual emotions. No doubt teasing, bullying, show-off feelings, so-called self-consciousness, with its conflicting elements of fear and anxiety to please, etc., etc., prefigure much of the sexual life, but this significance is lost to the child. During the first two years of puberty the physical capacity with its vague, undefined sensations, and lower ranges of desire, come into being. But it is the period of adolescence proper, or from seventeen to twenty-five, that serves to weld together these two separated regions. If this work is not well done, segmentation or degen-

eration results. This fusion is the result of the last and culminating effort of evolution. It is the crown of life, and, when incomplete, discounts the individual immediately in all the higher phases of the struggle for existence, including here, as most important, the struggle for a mate, and the opportunity to love. It is the period which demands the strongest and most subtle forces of education to complete the fusion and to modulate into one harmony the highest radiations and the most fundamentally physical facts. And, despite some talk about putting the best teachers in the lowest grades, the common sense of humanity has always acknowledged the present arrangement as an educational necessity. A child of five has so much evolutionary momentum behind him that he will develop in spite of the most untoward surroundings. As when you slide a curling stone along the ice, or roll a carpet ball, it is the last stages which depend most completely on the environment. It is here where the curlers use their brooms and get down upon their knees and rub the ice. If education is environment, as distinguished from the initial force of heredity, it is this last period of adolescence when environment or education counts for the most, and when its neglect is the most disastrous and inexcusable. Savage races, if they have no other education at this period, submit the young to initial rites and ceremonies. This is manifestly a sort of education by games and plays, and calculated to have a stimulating and strengthening effect upon the mind.

This period, according to Clouston and other alienists, shows the strain put upon the higher brain function. Mental troubles are far more frequent between seventeen and twenty-five than for the five or six years before or after. Adolescent insanity is the expression of failure of evolutionary force. Nature has been unable to complete the circuit, and we have as a consequence, in many cases, the most deep-seated degeneration of the whole of the mental life.

From the intellectual standpoint fetichism is the characteristic neurosis of this period. Fetichism is one side of the phenomenon of segmentation, and consists in some narrowed image or chain of images, or insufficient points of contact with the external world, carrying into play, and constituting the only condition which does carry into play, the deeper emotions of physical love. For example, a scolding voice, a hand, an eye, a foot, a handkerchief, a peculiar color of hair, or the smell of it, a shoe of a certain pattern, the sight of blood, or the witnessing of torture, either the giving or receiving of pain, often in some peculiar or eccentric manner, are sometimes the only events which arouse the erethisms of sexual emotion and appeal as sexually attractive to the individuals concerned. One man blackens his sweetheart's face with burnt cork, and sits holding her hands, and looking at her in a mirror. Another's greatest satisfaction is to have his wife lather and shave him. The lighter forms are most

significant and interesting. A teacher of undoubted ability, whose experience was confided to me, had found in adolescence an enthusiastic and morbidly sexual attraction for hands of both men and women. Another, at nineteen, writes of the attraction for her of a soft, silky beard: "I was often filled with an almost irresistible desire to touch his beard. When I had this feeling I could not talk to him or look into his eyes." On one occasion this feeling was gratified. "The touch of his beard thrilled me. I knew for the first time that the feeling was sexual."

Another writes: "At sixteen I was in love with a boy of my own age, who, to show his devotion for me, scalded his hands in hot water, and rubbed them in salt. When I heard of this I was so sorry that I went and did the same thing."

All rites and ceremonies and all the forms of good manners and polite society are made of some such psychic material as this. A discipline which excludes the possibility of such radiations has lost touch with much that is vital in the adolescent soul.

A sort of pernickety or over-fastidiousness is a very common form of light fetichism. The individual sticks, as it were, over some triviality, which is invested with too great meaning or importance. President G. Stanley Hall gives a case where a lasting prejudice was established in a lady's mind against a certain young man because his cuffs overlapped the wrong way.

Definite and narrow limitations in ideals, especially if established at too early an age, are certainly fetichistic. Take, for example, from an eighth-grade girl of sixteen:

"I would like my ideal young man, first of all, to have a constant character, and not a fickle and changeable one. He must be tall, dark, and very handsome. His hair must be curly, and he must have a little mustache. His eye must be deep violet, kind, and gentle. But I never hope to see this man."

It is possible, of course, that before she is twenty-five some short, fair, and ordinary-looking young man may have succeeded in breaking down this fetichism, and enlarging considerably her range of symbolism.

Fetichism is, of course, a quality which extends through every domain of life. Narrow views in morals and religion are of this character. The mysophobia and fearful neatness of some housewives, the painful setness of both their household furniture and of their characters, are other common instances.

Fetichism always means a narrowing of the possibilities of love, and from the emotional side this often gives opportunity to fear and repulsion. The cure for fetichism is to be found in a greater expansion of all the higher intellectual and emotional enthusiasms, particularly of art and religion. To feel the ecstasy of color and of sound, to fall in love with

God, are natural and necessary adolescent expansions; but without enthusiasm these themselves may be dry and fetichistic. A segmentation may result and the physiological unity be missed. It is the letter which is fetichistic, the spirit which giveth life. Radiation and mobilization of energy are the secret of stepping heavenward.

The data at my disposal (written adolescent confessions, including experiences in falling in love) indicate that these radiations occur largely without much direction or understanding of them by the pedagogue. Indeed, he frequently gets in the way; perhaps, with only a half knowledge and little tact and sympathy, he might only get in the way oftener. Perfect ignorance is safer with some. That these forces underlie the whole of school work is, however, no longer a matter of question. Very many speak of love of nature, music, and poetry enlarging their notions of love, and sometimes forming a substitute for this primitive passion itself. This experience from a young lady of twenty-two I quote as being a typical normal case:

When in the eighth grade, between the age of fifteen and sixteen, a young boy entered our class toward the end of the year. My feelings toward the boys in the class had always been most friendly, in a general way. But when this boy entered the class, all my friendly feelings seemed centered upon him. This friendly feeling grew from the very first time I saw him. It seemingly was acknowledged by him, which only intensified my feeling. After a few months—I do not remember just how long—I felt this strong feeling of love take full possession of me. It was my predominant thought. I would try to reason myself out of it, but could not then. I desired to take some one into my confidence, but dared not. It was now a most serious thought with me, and often made me sad and lonely when I saw no way of fulfilling my desire of a closer communication with him than was afforded in the schoolroom. I watched closely his every action, and, if anything in him displeased me, it was quickly excused, or else the hope of converting him entertained.

No encouragement outside the schoolroom was ever given him, and, indeed, when he insisted on knowing my address, a dreadful feeling filled my very soul.

About this time we took up the study of "Evangeline," in which I gave expression to my thoughts. This relieved me very much in one way, but in another intensified my yearning to become a second Evangeline.

None of my feelings were ever expressed to others; but some of my most intimate girl companions, evidently noticing something, would often joke and tease me about him, which I then seemed to enjoy.

My feelings often became so strong that I felt, unless my hope was realized, I certainly should die. A week or so before graduation he left the school to my sadness, and I never saw him after. For a long time I entertained the hope of meeting him on the car or street, but gradually, with time, and, I think, with knowledge, the hope died out. As I write this, every scene is vividly recalled, and I rather surprise myself at the delight and enjoyment taken in it now after six years.

Of special note here are the fear of going further by revealing her address, the silent brooding and loneliness, the pleasure in being teased, and the radiation afforded by the study of "Evangeline."

Feelings involving death and suicide are commonly associated. Out

of over 200 returns, 89 per cent. have brooded on death and suicide during their early teens. It seems as if this great background—thought of death—was needed to bring out the utmost resources of love, that the soul needs to get its bearings and to know intimately this largest of all fears in order completely to overcome it. Anger, too, which marks a break in the harmony of love, and sometimes a means to a higher realization of it (as witness lovers' quarrels), is often radiated by means of this conception of death. A girl of fifteen, when offended by those she loves, goes up to her room and locks herself in. She lies upon the bed and folds her arms across her breast. She breathes quietly and imagines she is dead. The door is opened, and she is discovered lying cold and still. Her mother and the rest of her family rush in. "Oh that I should have parted from her in anger!" Kisses fall upon her lips. The neighbors come. "Poor young girl, to have died so young!" The coffin is heaped with flowers. She knows the text from which the clergyman will preach, and just what he will say. The lid is screwed down, and she is carried to the grave. Nor does she stop until the clouds begin to fall upon her. She then feels better, gets up, and comes downstairs with every trace of her bad feeling removed.

By this natural, involuntary, psychic mechanism, nature has radiated her passions into higher regions. She feels convinced that people love her after all. Her psychic wounds are healed.

Love of nature, one of the highest and subtlest radiations of physical love, frequently gains a stimulus from these associated centers of passion. When angry, one young woman (if possible) rushes out of doors and looks up to the starry vault or the blue sky. At no time does she feel more exquisitely their beauty and charm. This feeling almost immediately dissipates her anger.

An experience in answer to my questionnaire on "Love of Nature" will indicate the subordinate elements which obtain radiation in this emotion.

At the first view of the lake (Michigan) everything seemed coming toward me. The sand came whirling up the hill, and almost lifted me off my feet. The lake seemed to be following, and the waves dashed themselves against the beach with a roaring noise. I was keenly alive to the beautiful coloring of the water, the dark green, almost black, in the distance, with every now and then streaks of blue and purple, which changed to lighter green, surmounted by great, foaming, white caps which broke out against the yellow beach. I wish I could paint the scene, but I could not show the movement which I saw, hence it would seem dead to me. I felt the grandeur of the scene, the wildness, and I had a sensation of intense loneliness, though there were others with me. I think I was conscious of my breathing, for I felt a throbbing, an inward wringing and bleeding, as if my heart were breaking. I shrank from the view of the water, but it held me and seemed to draw me with a painful fascination. Perhaps, if no one had been near to me, I would have held out my arms to it, for I felt it held something which I would give the world to possess; something which it ought to give to me and

me alone. I wondered if it was very painful to die among those beautiful white caps; they seemed too beautiful to be cruel.

My returns show that this enthusiastic appreciation of nature does not come in earlier than adolescence, and, on the other hand, as Krafft-Ebing says, "Who does not, in this period, become enthusiastic for the sublime and the beautiful, remains a Philistine for the rest of his life." The means of expression and of radiation for these feelings are found to the greatest extent in the various arts. As Guyau claimed, art should double and triple our existence by employing the surplus of force unused by the ordinary demands of life. Landscape, which Paul Desjardins ("*Esquisses et impressions*") calls "the charming summit of modern art," is especially efficacious here. Says he: "Landscape expresses with force everything which by the other arts, save music, would be inexpressible; a certain number of states of soul, and the most intimate and most vague, . . . and which are, for all that, the most delicious. I mean all those shades of melancholy, love of solitude and of silence, serenity, grave joy, not trivial and exterior—there is no landscape which makes a laugh—the ecstasy, and, indeed, everything which one suffers from not being able to put it into words."

Of the greatest significance in adolescence, and throughout the whole of childhood, is the element of fear. In matters of love it is particularly important. You remember that Don Juan's successes were frequently precipitated by circumstances giving rise to fear. A thunderstorm by the seashore arouses the need for protection in the fair one's mind, and she throws herself into his arms. Thomas Hardy makes one of his heroines yield to an unworthy lover who had frightened and charmed her with his wonderful encircling sword-play, even going the length of cutting off a lock of her hair. The attraction of many women for the "bold, bad man" is a degenerate instance of this same tendency.

In higher regions the old religion understood the art of arousing a preliminary erethism of fear in order to reclaim the worshipers under this stimulus to a deeper sense of divine love and protection. For this purpose the most deadly snakes were used, dark and gloomy places were chosen for devotion, bloody sacrifices were perpetrated, wild and terrible orgies were enacted in the presence of the people. The spectacle of the priests, who, through their divine powers, were fearless in face of all these fears, boldly seizing the most venomous reptiles, or courageously inflicting upon themselves the most terrible wounds, led the devotees, and, indeed, the whole of the people to whom these rites were suitable, to turn to them and the higher powers they represented, with a feeling of desire for protection, gratitude, and love.

In early times the spring meetings, at which these religious orgies were held, were also the periods at which the sexes met each other freely

and marriages were celebrated. Indeed, the ethical form of marriage, the foundation of our present constitution of society, may be said to have been begun by the recognition and control by the religious leaders of sexual unions stimulated and precipitated at such times.

Even in more modern forms of religion the element of fear remains important. The practice of the old Scotch minister, who used to shake his hearers "over the mouth o' hell" before portraying before them the infinite graces of redeeming love, follows the same psychological curve. A preliminary feeling of guilt and consciousness of sin are, perhaps, a necessary ingredient in the feelings which culminate in the hunger and thirst after righteousness and the desire for atonement with the higher powers.

Fear, as President Hall has recently shown us in his wide-reaching and suggestive article on this subject in the *American Journal of Psychology*, is very widely spread in childhood. It would seem that something ought to be done to discharge these fears and to prepare the way in early childhood for the higher and later reconciliations of love, art, and religion. The immense value of the grotesque in art seems to have been neglected here, although Ruskin has pointed out its value in all Gothic art. It is equally important in Japanese art. The art founded on the dragon alone would be difficult to dispense with even now.

Children's drawings are, perhaps, naturally grotesque, and somewhat like the art of lower races, who continually used the objects of their fears as a subject of their art, and thus reclaimed them for their higher imagination. When a child draws, in broad daylight, on ordinary paper, and with material paints, something which he fears or has feared, he not only gets hold of a deep-seated interest, but discharges it along lines of sympathy and love. The joyful appreciation of his art work by himself and others is evidence of this fact.

I have here a collection of children's paintings of objects which they fear, some of which, although grotesque, are more artistic than the most of children's paintings which have behind them no deep-seated interest or emotion. These are, of course, only the beginnings of art, but I am convinced that there is here psychic material which will amply repay the teacher who is able use it. (Paintings exhibited and explained.)

To sum up, this important period of life demands that a better understanding be obtained of the real forces at work. Mere leading, mere repression, will never gain the end in view. Divided personality, a segmented life, and loss of energy, are the penalty paid for working in the dark. Fusion of the various elements is sought by nature, and must be aided by the teacher. An arrangement of the education of early childhood that will leave the instincts of this period with hooks that will connect them with the enthusiasms of adolescence, a tactful and delicate

recognition of the source from which these enthusiasms spring, are among our greatest needs. It is useless and harmful to try to stamp out these immense hereditary passions. This is not nature's meaning. She has taken too long to evolve them from the past. They are, even in their cruder forms, powerful expressions of the will to live. They are immense forces, which must be related and brought into harmonious control. The greatest problem before the educator of the present day is to mobilize and radiate these great instincts of anger, fear, and physical love.

DISCUSSION.

PRESIDENT A. H. YODER, Vincennes, Ind.—I shall add a few thoughts only. First, as to the distinction between pubescence and adolescence. Pubescence covers a short nascent period just before the time of most rapid physical development; while adolescence is the prolonged period of slow, full, and mature development. This may cover a number of years, ending as late as the age of twenty-five. Second, during these two periods the child develops from biological selfishness into altruism. It seems to me very questionable whether teasing, etc., are manifestations of sex. Mrs. Hall has recently made an interesting study of her own boy. Within a period of seven months there appeared a number of waves or crests of learning words. These crests showed themselves at periods of about one month. The morbid side of these periods is interesting, but we are more interested in the usual and ordinary. Till pubescence there is a tendency to selfishness, then comes a period of altruism.

MENTAL DIFFERENCES OF SCHOOL CHILDREN.

BY J. A. HANCOCK, SUPERINTENDENT OF SCHOOLS, DURANGO, COLO.

The first stage of the development of the course of study was the mere addition of subjects. This resulted in an overloaded condition. The second stage into which the course has passed includes a study of each subject in the light of the contributions from a number of fields of knowledge, the elimination of the relatively unimportant material, and the adjustment in scientific relations of what remains.

The purpose of this paper is a résumé of the results of some of the experimental studies on children of school age—six to twenty-one—with reference to their bearings on such certain problems as the relation of physical to mental development, the relative powers of the sexes, the periods of retardation and acceleration of growth, the separation of the sexes in the schools, and some of the methods of teaching.

The theory that the development of power in childhood proceeds in

the reverse order of its dissolution has received some confirmation in a number of studies, notably that of Preyer.¹ Ribot² says of memory that the loss of recollections is in an invariable order, namely, recent events, ideas in general, feelings, actions; and that the order of recovery is the reverse of this. The studies in mind seem to me to show that the development of memory is in this same reverse order, namely, that of actions, feelings, ideas in general, and recent events; these, of course, overlapping.

The impulse of childhood toward activity is proverbial. Learn to do by doing represents the experience of the races to the effect that the activity of muscle has a great value in learning. All of the studies on children's interests³ show the leading one to be in activity closely associated with use. Shaw found this to be 34 per cent. of the combined lines of associations. Mrs. Barnes⁴ finds that strong lines of action appeal mostly to and are best remembered by children. It is in terms of movement that so much of children's thinking is done. Both Brown's and Thurber's⁵ studies suggest the same conclusions.

Perhaps the negative fact that memory for figures and reasoning processes and other lines of interest are so poor in earlier years is worth mentioning.⁶ Number associations in Shaw's study hardly reach 5 per cent. It is not suggested that action is the only line along which memory develops, but that it is the principal one. The studies recently reported in the *Pedagogical Seminary*⁷ on emotions and feelings show how much of child life centers around these.

The time when children can deal with general principles of a subject is pointed out in part by the necessity felt so generally for postponing technical grammar till after primary grades. Barnes and Shaw each finds the power to classify weak till twelve years, and that the reasoning of young children is fragmentary and broken. Two years ago, using the method of Jastrow,⁸ I tested 500 of my pupils. The disposition to classify was prominent in fourth grades, culminating for girls in sixth and for boys in seventh grades; that analysis became strong in third grades, culminating for girls in seventh grades and for boys in the eighth and high-school grades. Peculiar to second and third grades was the pres-

¹ Chapter on "Aphasia in Development of Intellect;" also Hancock, "On Motor Ability," *Pedagogical Seminary*, Vol. III., No. 3.

² "Diseases of Memory," chap. v.

³ E. g., Shaw, "Children's Interests," *Child Study Monthly*, Vol. II., No. 3.

⁴ "Studies of Historic Method."

⁵ Brown, "Oakland School Report," 1892-93; Thurber, "Transactions Illinois Society for Child Study," 1897.

⁶ "Memory in Children," *American Journal of Pedagogy*, Vol. IV., No. 3; Hancock, "Children's Ability to Reason," *Educational Review*, 1896.

⁷ Russell, *Pedagogical Seminary*, Vol. II., No. 2.

⁸ *Educational Review*, Vol. II., No. 5.

ence of a large vocabulary not evidently associated along any definite lines except that of similarity of sound. In almost every line studied the culmination of a power for the girls was at least a year earlier than for the boys.

I published last year¹ accounts of tests on children's ability to compare numbers. Power did not develop to any great extent till between twelve and thirteen. There seemed to be a limit to the number of steps in a reasoning process which children could take. Power to reason from many to one and from one to many was fairly strong from seven years on, but the ability to take three steps was not generally present till thirteen. Comparing two fractions was a yet more difficult process till fifteen was reached. Boys lost power about eight and fourteen and girls at ten. Differences with these exceptions were slight, but in the boys' favor. The rate of increase, all told, was most rapid about nine, thirteen, and fifteen. There were many coincidences between the results and the curves for growth in height and weight. The retarded periods seem to be those of second teething and of certain changes at puberty. The literature of primitive peoples² shows that the sense of historic time comes late, that its order of development is the power to count, to note periods of time by some instrument, and to record events. Mrs. Barnes found a similar result true of children. The true sense, though present, was obscure and vague till after twelve, and the sense of the relation of cause and effect perhaps equally so. Again, many coincidences appear between these results and the curves for growth. The prominence of emotional life with growing reasoning power needs more consideration. Starbuck³ concludes that "the years of greatest frequency of conversations correspond with periods of greatest bodily growth for both males and females."

Porter⁴ thinks that growth in mental power is associated closely with physical growth. Gilbert's,⁵ Lange's, and David's⁶ claims to the contrary seem to me to be true only of the development changes at second teething and puberty. Their results, all told, show, too, general coincidence with curves for growth.

Kirkpatrick's⁷ conclusions are of interest in view of present tendencies. These are that objects are remembered better than written names, the written word better than written names, the written word better than the

¹ *Educational Review*, October, 1896.

² Barnes, "Studies in Historic Method."

³ *American Journal of Pedagogy*, Vol. VIII., No. 2.

⁴ Porter, "Transactions of Academy of Sciences."

⁵ Gilbert, "Yale Psychological Studies," Vol. II.

⁶ *Educational Review*, October, 1896.

⁷ *Psychological Review*, Vol. I., p. 603.

spoken, visual qualities better than sounds and imaged objects. The special memory for words does not improve with advanced years. The kind of memory changes. There is a limit, not clearly defined, to the number of words each child could recall. The differences in power were nearly all in favor of the girls till high-school and college years.

The retarded period in number memory seems to come about the fifth or sixth grades, varying somewhat with the grade and school. Testing with reference to this a few weeks ago on six points in comparison of numbers, I found the ability of fourth- and fifth-grade girls the same. Two years ago it was sixth-grade children that seemed to be at a standstill. Botton's, Scott's, Rice's, Holmes', Dexter's, and Mrs. Tucker's studies all point to fifth and sixth grades as retarded stages in number science, memory, or spelling ability. Russell's study on reading brings out the curious fact that it is about this same period that children are disposed to do so much reading, of so miscellaneous a character; that in the years immediately following the amount decreases, but is in definite lines. Here, it would seem, is a time for less arithmetic and more carefully planned reading, history, and manual training. I have found it especially helpful to have fifth- and sixth-grade teachers meet in the same section of the teachers' meeting, and to exchange work where possible. Each gets thus a better understanding of the difficulties of the other's position and is less likely to criticise the other. Something of the same is true with first and second grades.

An interesting explanation is offered by Bryan¹ of the loss of power, which, true of children physically, may in some respects be true mentally:

"It would seem something more than a reasonable surmise that the general acceleration of the rate (tapping) in girls from twelve to thirteen, and in boys from thirteen to fourteen, is an expression of high tension in the nerve centers in many individuals at those ages; that the decline following is an expression of nervous fatigue consequent upon the functional changes at those periods; and that the reacceleration is a sign of recovery from that fatigue."

Both Bryan's and Gilbert's study shows the increased ease of fatigue about eight for both sexes, for the girls at thirteen and boys at fourteen, recovery following the succeeding years in each case.

Girls fatigued less than boys, but also did less work in the same periods.

Writers worthy of respect have insisted that the sexes should be separated in certain grades. No study of which I know has demonstrated *great* mental differences between the sexes sufficient to warrant this. Conditions rarely make separation feasible, and I doubt its desirability. There are advantages of association under desirable supervision. We have

¹ Bryan, "Voluntary Motor Ability," *American Journal of Pedagogy*, Vol. V., No. 2.

not yet tested well the lines more feasible, which are: better-trained teachers, with a knowledge of these differences, with a greater opportunity for the individual training of the pupils, with more laboratory, library, and shop facilities, and with a disposition to get in closer touch with their pupils; and more men teachers in sixth, seventh, eighth, and high-school grades. With these lines carefully developed, separation, it seems to me, would more likely be a misfortune.

The theory of Churchton Brown¹ that a power should be trained most during its period of rapid development seems to be thus far without contradiction of consequence. The periods of most rapid growth are those of greatest health. There is a strong disposition to make great use of these powers during such periods. My study read before this body three years ago² pointed out the undesirability of small writing, much current kindergarten work, and piano practice for young children. I have not found it desirable to use copy books³ nor drawing books till about nine, and this is the time pointed out by Bryan when power of precise movement first grows at a rapid rate. This, too, is a time when Barnes' "Study of Children's Drawings" suggests that the beginning of technical drawing can best be made. The best results in manual training are secured with children between thirteen and eighteen or nineteen. These are the years, again, when precision of movement, strength, and size of hand and arm are growing rapidly.⁴

From the studies of Barnes, Lukens,⁵ Luckey,⁶ and others on children's interests and drawings, the following conclusions are taken: Drawing should be an undifferentiated study during the first three or four years. It should enter as a part of nature study, reading, number, and language work. Free and accurate use of the muscles, according to the laws of their development, is necessary. In some third grades and all fourth grades the grammar and technique of drawing may be begun, and the use of the drawing book permitted, unless the teacher is an expert. The younger children, especially, should have access to an abundance of good pictures, illustrated books, magazines, photographs, and plates of great men, great scenes, great sculptures, paintings, and edifices. Aim first to eliminate all scribble and meaningless strokes from the children's drawings, emphasizing the bold, significant lines and human figures in action.

¹ Morris, "Book of Health," chap. "Key and Hartwell."

² Hancock, *Pedagogical Seminary*, Vol. III., No. 1.

³ See Shaw's "Children's Writing," *Child Study Monthly*, Vol. II., No. 3; Lukens, in "Herbartian Year Book," No. 2, pp. 64-5.

⁴ Zeising, quoted in Vierordt's "Anatomie und Physiologie des Kindesalters;" Bryant, *American Journal of Pedagogy*, Vol. V., No. 2; Gilbert, "Yale Psychological Studies," No. 2; Roberts, "Manual of Anthropometry."

⁵ Lukens, *Pedagogical Seminary*, Vol. IV., No. 2.

⁶ Luckey, *Northwestern Journal of Education*, 1897

"Drawing is for young children a language, a means of expression." Historically writing developed after drawing and as a more exact means of expression; it seems to me that it is not needed till late in the first or second grades. We press the development of means of expression too long before the increase of thought to be expressed demands it.

Russell's study on reading, already referred to, seems very important; Brown's conclusions also. Brown says: "The period during which imaginative literature of the more childish sort can be used effectively in connection with the instruction in language, literature, etc., extends through the fifth grade (in these schools); and that, while considerable interest in historical narrative can be counted on from the fifth grade upward, the clear superiority of such narratives to legendary literature in the natural interest of the children does not come out till the ninth grade."

Mrs. Barnes' "Studies of Historic Method" has many helpful suggestions for actual school work and the order of approach in the teaching of history. That it is motor memory which develops so early and to so great a degree, that there is a limit to the number of details which should be introduced into narratives, are points strongly emphasized. The limit for history and reading differs from that in arithmetic.

The slow development of reasoning power seems to warrant more attention to the inductive phases of teaching, especially in arithmetic and grammar. We need to determine more accurately the limits of pupils' powers and to arrange work which shall exercise their powers freely within these limits as a basis for the development of power for greater limits. The peculiarly bright, yet evanescent, memory of children for word forms leads teachers into many blunders. I think that arithmetic work like that of the Kansas City schools is in right lines. Speer's new book on arithmetic has also much that is sound and helpful. We have great need to grow to a yet greater appreciation of the fact that children are little men and women, and that the type of memory generally most prominent with them is the motor.

The greatest truth emphasized by Hall's "Contents of Mind" seems to me to be the necessity for a greater training in the lines conditioning the movement of mind in the inductive stages. Perhaps the relative neglect of these stages accounts for the poor results in many lines of school work in grammar grades. The tendency is to expect young children to begin with general principles, forgetful of our own experience and that of the race.

The investigations on spelling by Dr. Rice¹ are so recent that it is unnecessary to comment on them further than to express confidence in the work and to resume the conclusions which bear so definitely on schoolroom work.

¹*Forum*, June, 1897.

Increased amount of time beyond a certain minimum—fifteen or twenty minutes per day—does not improve the quality of the work.

Some variety of methods secures the best results. The personality of the teacher is a very important factor. The selection of material from the various school text-books does not generally contribute to good spelling.

Material for spelling work should be studied by teachers with reference, first, to the elimination of easiest words and rare words, which last may be taught incidentally; second, to the grading of the words with reference to difficulty and vocabulary, giving precedence to the common words and to their arrangement with reference to many of the rules.

The purling small words should be grouped and taught together.

The omission of returns for certain ages from many experimental studies seems to me to be a mistake. All of the many monographs are sure to be studied comparatively. Research work cannot solve wholly the problems of education, but its importance is great. More precautions should be taken to secure exactness and completeness of work.

DISCUSSION.

S. S. PARR, St. Cloud, Minn.—So far as broadly marked differences between the sexes in school were concerned, the old idea was like the famous chapter on snakes in Ireland: there were none. This was largely the result of teachers and psychologists projecting an ideal child from their reminiscent experience, instead of building up a knowledge of the reality by observation. The new view is that there are differences. At present it is assumed that these differences are not so broad and deep but that they can be so reconciled as to allow instruction together to go profitably on. That many current practices in education will be modified to suit the demands arising from differences of sex cannot be doubted.

Assuming that the grades include eight years, they begin about the period of second dentition and last to about the crest of adolescence. In any consideration of stages it is well to keep in mind that, except periods of comparatively slight disturbance, development is a somewhat regular advance in size, power, and complexity. Usually periods of seemingly latent condition are simply slow transitions from one culmination to another. As epochs in the physical being, dentition and adolescence are the finishing strokes of long stages leading up to them.

In what is here said concerning sex differences in the grades it is taken for granted that body and mind are interdependent, and change in the one is paralleled by corresponding modification of the other.

Second dentition is significant of functional preparation for the more solid kinds of food, and of greater physical independence. Sikorski has noted that at the close of this period there is something more than the average increase of weight, greater muscular vigor, and better health. In the matter of time the sexes do not differ perceptibly in this change.

The adolescent period is one of more than average increase in size, weight, and

power. From ten to twelve years of age girls are somewhat taller and heavier than boys. They are also more mature, and their minds are more fully possessed of the adult faculties. In dealing with the sexes in classes, the difference of condition due to the earlier adolescence of girls is a factor requiring constant attention.

Adolescence means still greater mental and physical independence. Maturity of whatever kind signifies greater completeness, and hence less and less dependence on environment. Reproductive ripening of the human being is evidence of greater power of self-preservation and of more ability to promote the welfare of others of the race. It, of course, is doubly significant of the rise of the parental instinct.

Before ten years of age the sexes are not markedly different in size or weight; after fourteen the boys are taller and heavier. The investigations of Ottolenghi point to greater dermal sensitiveness in girls from ten years on. At six years Marro and Ottolenghi found that girls have a tone compass of four-fifths that of the boys. At six to eight years Michialoff and Frau Eckkert found adenoid growths and deficient development of the organs of speech more than twice as frequent in boys as in girls. As their observations were conducted in a severe climate, subject to many and sudden changes, the greater outdoor life of the boys would explain this. The inquiries of Aufosso indicate that below ten, girls have more sympathy, boys a more fully developed sense of honor. Part of this is due to sex, part to the greater freedom of intercourse granted to boys.

Adolescence marks the advent of the child as a social being. Before that time his social powers are latent, and his type of thought and action is predominantly individualistic. Ideas are naturalistic and result from contact with the immediate environment. They are the imprint of comparatively few sensuous impressions of visible objects, or fanciful combinations of these notions. Their trend and characteristics are the personal and egoistic.

At the beginning of the grades the emotions are of the individual type. They are predominantly simple variations of pleasure and pain. These basal feelings are specialized into hope and fear, joy and sorrow, love and hate, and the pleasures and pains of sense and appetite. Only the shadows of the social feelings are present, and they are overborne by passions and appetites.

From six to ten years the child's business is to eat and grow. His categories are those of use, action, and sense pleasure. He is not concerned with secondary attributes and details, but expends his energy on broad appropriations and actions. In the sense of a fixed conscious attitude of mind, there is no will. There are only more or less permanent impulses.

The investigations of Hall and others on fears, games, and the like, on the whole, show but narrow differences between boys and girls below ten, due to sex; yet the fore-shadowings of this contrast are everywhere present. While it cannot reasonably be held that latent characteristics of sex are sufficiently marked to demand separate schools, classes, subject-matter, or methods of control, it is true that there can be no intelligent teaching which does not acquaint itself with them and constantly take them into account. As a matter of fact, teachers gifted with insight have always kept in sight the thought that "he is a boy," "she is a girl."

Boys are more muscular than girls and, therefore, have more independence and more power of self-preservation than the latter. Their greater energy makes them more difficult to control. This fact leads to less attempt to control, or the granting of greater freedom. Hence boys are more unrestrainedly allowed to go upon the streets, to visit mills, factories, stores, offices, and distant places. Their opportunities for association, companionship, and chumming are thereby multiplied indefinitely. The latent ideas and feelings of the social mind are thus fostered and developed. The association of boys with boys is pointedly remarked by Locke and Rousseau as a powerful source of training both good and

bad. If this element were a factor to be considered of great importance in the markedly isolated civilization of their day, it has gained tenfold in the urban conditions of society in our day. The truth is that the problem of the boy on the street is one of the really great questions of the day. Not only is this true for parents, but also for the teacher. It is likewise a fact that the partial failure of present schools to reach the boys as effectively as the girls is in large measure due to inability of teachers to understand and use the street experiences of boys and properly to recognize the contrasts of boys and girls in this regard.

The results of boys' greater experience and wider contact with affairs are important. As shown by Professor Barnes, the culmination of the historic sense as to persons in boys two years later (at fourteen), than in girls, must be due to this factor. Russell and others have shown that boys lose their childish credulity earlier and make stronger demand for evidence and reason. Miss Vostrooski's studies accent the fact that their consciousness of social relations is pushed forward by their street associations. Girls respond less vigorously to the spirit of emulation and do not acquire so fully nor so early the practice of toleration. Owing to greater familiarity with the minutiae of domestic life, and somewhat, perhaps, to finer sense powers, girls are better observers of details in nature and affairs, and more patient in executing details. Hall's examination of children's lies serves to show that boys' society develops the recognition of the need of truthfulness and also of strategem somewhat earlier in them than in the other sex.

As the experience of boys bears the imprint of the alley, the street, and the neighborhood, so that of girls takes dominantly the domestic impress of the home. Being confined to narrow limits and a small circle of persons, it is both poorer and more erratic than that of the boy. It is more the echo of family life and is less social than the experience of the latter. It is not so rich in impressions from store, factory, office, and public gathering. Its outlook is less broad and, therefore, more personal.

PARENTS AS CHILD STUDENTS.

BY MARY CODDING BOURLAND, PONTIAC, ILL.

As I realize the cosmopolitan character of this audience, the extent of the country from every region of which it is gathered, I am impressed with my ignorance of the condition with which the subject I shall present is surrounded in most of them. My experience has been gathered in a small corner; I can give it only in the hope that, it being a view from the home, it may serve to bind more tightly the fast-closing gap between it and the school.

Although not composed largely of parents, those before me would find their work much lighter if the work of parents were better done.

At the Illinois State Teachers' Association in Springfield, last December, a young woman, supposing me also to be a teacher, said: "Plans for helping the children are not hopeless, but when it comes to parents — you can't do anything with them." At the recent Child-Study Congress in Chicago I met daily criticism of parents, their ignorance, their apathy.

Educational gatherings are not conducive to the fostering of parental pride. The halo with which poets surround motherhood is not in evidence there. But the mothers, who are banding together all over our country, to learn better ways of rearing children, prove that they do not consider their case hopeless.

The National Congress of Mothers in Washington, D. C., showed the extent of the interest, and acknowledged the need of special training by adopting a resolution urging the founding, by the government, of a national training school for mothers.

The results of this congress in the establishment of new organizations will not be accurately known for some time, but a wave of truth has swept the land, carrying with it to higher ground our conceptions of parenthood, to which height those who have reached it will strive to raise the universal standard.

Many established institutions have added to their work that of helping parents in the study of their problems. Among these are many churches, kindergarten training schools, the Woman's Christian Temperance Unions, women's clubs, whose home departments, in many places, are taking up child study. I have the names of ten Illinois clubs which have this year included this subject in their calendars, besides those I shall speak of later, which have done special work.

The meeting of the International Kindergarten Union held at St. Louis, in April, showed, by devoting its first session to parents' problems, to what dimensions has grown the beautiful work so long carried on by many of their number. An average attendance of two hundred mothers at each of the general meetings attested their appreciation.

The various state societies for child study are reaching, through their round tables, many parents, and their programmes at their last annual meetings gave prominence to the needs of the child in the home. The Illinois society has seventeen round tables, nearly all composed partly of parents. Miss Wiltse, in her "History of Child Study," says that "perhaps no organization for study of children has secured the help of the mothers of the children as has the one in Michigan."

Among the cities of this central section of our country in which work for mothers' or parents' clubs is prominent, St. Louis, Chicago, St. Paul, and Detroit may be mentioned. St. Paul has a large number of mothers' clubs, which have formed a general board of mothers' clubs, Mrs. Cora Frances Power being the chairman. She has been active in forming these clubs for several years, and has also been instrumental in forming school unions about each school building in St. Paul.

In Chicago the Gladstone, Greenwood Avenue, Perkins Bass, and Garfield Schools have worked toward the formation of parents' associations in their districts, and permanent organizations will be formed next

year. The free lectures delivered in six of the public-school halls, under the direction of the trustees of the Ryder Fund, have helped to bring parents in touch with the schools.

These few organizations represent only a part of the great work which is so rapidly growing. Great as it is, it has reached, as yet, only a small fraction of the homes that need it. The teachings of Froebel and Herbert and Preyer and G. Stanley Hall are known and used in comparatively few homes. How shall this number be extended and these vital truths be put to practical use?

With a thorough knowledge of the recent works on child training, it would seem that no child should grow up unsymmetrically, with so much wisdom waiting to be applied. Five hundred years before Christ the wife of Pythagoras wrote advice to a friend, containing the gist of Froebel's "Mother Play," which, if acted upon, would have left fewer questions for us to solve, for there would be different children upon earth.

That the searchlight of science has been turned upon the child and has discovered so much of vital import will be of small moment unless it enters into the life of the home. An hour's ride in a street car, or a half day's observation of shoppers, will convince anyone that the ability wisely to train children is not born in the parent when the child is born into the world. We see mothers every day suppressing the activity which is the means of developing the brain as well as the muscle of her child. On the train I recently saw a mother shake her pale-faced little girl, saying: "Now, you sit still, and don't ask any more questions!" I could not resist the temptation to speak and offered to the child a kindergarten magazine, with some lovely pictures in it, asking her mother if the little girl were not ill. With a transformed face she said, smiling: "O no, but we've been traveling all night, and she couldn't eat any breakfast." She was expected to sit motionless and silent, however.

The precocious child is displayed; the lethargic child is left to itself; the properties of food needed by children at different stages of growth are as Greek to the mother, who should know how to build up the temple of the body, often weak in certain parts and, therefore, needing special food to brace it there.

Sleep is not regulated; little children are seen on the street and at entertainments late in the evening. They are allowed to go to evening parties during their school days. Not enough freedom for healthy play is given, nor is their play directed. Untruths are told children to obtain temporary relief from responsibility; "there are bugs" in things not desirable for them to eat, etc.

The temperament of a child is not often considered by parents in his training. A boy of three had been promised by his father a certain toy to play with, but he gave him another. The child took it, but, seeing

it was not the one desired, threw it down and flung himself violently upon the floor, where he screamed and kicked in a terrible way. The father sat by and laughed at this outburst, until he wearied of it, and *then* gave him the coveted toy.

To change these conditions, a practical application of the truths already achieved by child study must be made in the home. The parents everywhere must become child students, and that can be brought about only by devoted work on the part of those teachers and parents who are already enrolled as such.

Either the state or national child-study association should reach every known organization of parents, sending them the results of its work.

Helpful as are these clubs, those which are unconnected with any child-study society will find a few months with its help more beneficial than years of effort without its scientific basis.

Previous methods sought to fit the child to arbitrary laws; now, as child students, we seek laws to fit the individual child, and most beautiful we find them.

Although a small work and recently begun, the efforts of the Illinois Federation of Women's Clubs to form organizations of parents and teachers, connected with the state society for child study, having met with encouragement, may serve to show what may be done by similar organizations or by individuals. Its circular suggesting this work was sent to the clubs belonging to it in January of this year. Already there are a few organizations well started, and many will be formed in the fall. Two federated clubs—the Teachers' Club (Chicago) and the Evanston Woman's Club—already had child-study sections. The home department of the South Side Woman's Club has organized a round table for child study, with forty members.

In Oak Park the education department of their club has studied Sully's "Child Nature."

In Princeton the education committee of the Woman's Club called a meeting in March of all interested in children's training, and a round table of fathers, mothers, and teachers was formed connected with the Illinois Society for Child Study.

In Streator the education committee of the Woman's Council called a meeting in April, which formed an educational union. Its work will include the organizing of round tables for parents and teachers in connection with each school in the city.

A committee, composed of delegates from five clubs and from the teachers of the schools in the twin cities of Urbana and Champaign, met March 28, and decided to begin active work in the fall for child study. This committee stated its purpose to be "the practical application of the

large array of facts that have been achieved by recent child-study investigations."

In Pontiac the education committee of the Clionian Society (a purely historical and literary club) formed a round table in January. To save the time of busy teachers, fathers, and mothers composing it, and to assure the reading of literature on the subject to be discussed, the programme committee arranged to send the literature to each member in turn, one member of each neighborhood having its distribution in charge.

This work for child study, done by the Illinois federation, was strengthened greatly by the recent congress in Chicago, one session of which was presided over by the president of the federation, Mrs. Wiles. The money for defraying the expenses of this session was contributed by federated clubs in the northeastern part of the state, and Dr. G. Stanley Hall was the speaker.

The sentiment of teachers seems to be in favor of having parents take the initiative in the formation of organizations for their mutual helpfulness, and, if all clubs would make it part of the work of their education committee to do this, a great deal could be accomplished.

That there are many localities where only the teachers can do the work is illustrated by a meeting for mothers, the idea of which originated in the child-study section of the Chicago Teachers' Club.

The principal of the Garfield School sent out invitations to the mothers to meet at the school. To the one hundred who responded a talk on the care of the body, ears, eyes, etc., was given, followed by a pleasant programme from the children. Increased cleanliness in the children and individual visits from the mothers resulted from this meeting, and others are to succeed it this fall. A large foreign population makes this an excellent method for such a locality.

Fathers are beginning to desire recognition in organizations to promote the children's good. Child study can interest them. The scientific investigations of the scholars of the day appeal to the cultured; the practical results interest others. Several fathers have been at once attracted by reading "The First Five Hundred Days of a Child's Life," which appeared this year in the *Child Study Monthly*. They must be interested, if in the home is to begin aright the education of the child. For what does it profit a woman if she "gain the whole world" of child-study wisdom and has not the co-operation of her husband? In no way can a man better serve himself than by understanding and rightly guiding his children.

"Whoso shall receive one such little child in my name receiveth me."
"But whoso shall offend one of these little ones which believe in me, it were better for him that a millstone were hanged about his neck and that

he were drowned in the depth of the sea." It was not to women, but to men, that these words were addressed. "Take heed that ye despise not one of these little ones."

Possibly such work as parents can do may not be properly called child study. They can put into practice the wisdom of the scientist who works in that line. They can keep simple records of the development of their children, which, given to teachers on their entrance into school and continued by both parents and teachers, would form such a record as the present dean of Harvard Scientific School considers necessary properly to place students in the university courses.

They can keep in touch with the school life of their children. That most parents are not so situated as to give time to scientific child study, even had they the requisite knowledge, is evident. Through the work of clubs composed of parents and teachers, ability to do so will be found and developed.

One of the more immediate services, and a much-needed service, which these organizations may effect is the enlightenment of citizens in regard to new educational methods. In three cities, of three different states, I have known of men who, as superintendents of the schools, had done superior work; but the new methods they adopted were too far in advance of their patrons, and, as soon as they were well started, their progenitors were asked to resign. Voters must learn to understand why the school tax is large, and to take such pride in the equipment and success of their schools that they will work for an increase rather than a decrease in the taxes they pay for its support.

Only through the education of the people can the kindergarten be a successful part of the public-school system. Their votes must put it there, and wisdom must abide in the boards of education which undertake to control them.

Those who work to interest parents in child study will frequently be met with the sad exclamation: "If I had only known before!" or, "I cannot leave my children to go to these meetings."

Does it not seem strange that training for duties that will devolve upon the vast majority of men and women, in the rearing of children, should be omitted from their education?

You who have your frequent inspiring meetings, your finely edited educational journals, your specialists in every line ready to aid you; who have had the training which precedes successful entrance upon the profession of the teacher—do you realize, when judging the failures of parents, the ignorance with which nearly all of them look into the face of their firstborn?

When I reflect that the knowledge I longed for when first I began to realize my responsibilities in guiding my own children had been stored

in the minds and hearts of many from whom I might have received it in my school days, and when I realize that the learned professor who struggled to gain entrance into my unresponsive mind for algebraic problems could have told me of Comenius and Froebel and the wife of Pythagoras, I am unreconciled to methods which withhold knowledge vital to life's responsibilities and devote so much time to matters less essential in the education of the young.

Truly, the time to prepare men and women for parenthood is during the latter part of their school course. With the arrival of the child in the home comes a very urgent need for using knowledge. When Gertrude rebelliously announces that, unless allowed to go driving, she will "dust do out in the darden and eat some more bugs," saying, "I eated free this morning, two smooov ones and one wooly one," ready philosophy is needed to manage her. When, after repeated whippings for leaving home without permission, a little three-year old said, with still streaming eyes, "Don't you look, mamma, I'se a doin to run away," experience is required to comprehend the child's idea of punishment. A knowledge of child nature should be acquired before the need to use it arrives.

Remember Herbert Spencer's words: "Whether as bearing upon the happiness of parents themselves, or whether as affecting the character and lives of their children and remote descendants, we must admit that a knowledge of the right methods of juvenile culture, physical, mental, and moral, is a knowledge second to none in importance.

"This topic should occupy the highest and last place in the course of instruction passed through by each man and woman."

DISCUSSION.

DR. JENNY B. MERRILL, Supervisor of Kindergartens, Public Schools, New York, N. Y.—In the opening article in "Studies in Education" sent out this year by Stanford University, Cal., Professor Barnes speaks of "'Undirected Observation in Everyday Home and School Life,' as being the most extended and probably the most useful work being done in child study today." He says: "Those who deny the necessity of conscious, direct study of children always point for confirmation of their statements to certain mothers who know nothing about child study, but know all about children." However unconscious the study of parents, it is none the less real, and hence, when parents are once aroused to the child-study movement, they become its best helpers. But the field of observation of the mother is limited, so that it is often difficult for her to recognize general law. Parents study the individual child, and are often led to believe that no two children are alike, because no two of their children are alike. I heard a mother state at a mothers' congress that she had certain formulæ for her first child, she had fewer for her second, and none for her third. She seemed to infer that children all differed to such a degree that no general laws can be followed in their training. In the discussion I said that, if this were

the case, it would be quite useless for mothers to meet and confer. It is a great step in advance when we learn with such a mother to respect individuality; it is the lesson that many a teacher needs; but, again, there are the lessons that the parent needs to learn from the teacher who, dealing with many children of the same age and grade of advancement, finds much in common that is reducible to law.

I have been asked especially to speak of some of the parents' organizations for child study that have been held this year in the East. The general congress of mothers at Washington has been followed by state organizations. I will speak for New York state. There is now a Mothers' Congress of the State of New York, with an official organ called *The Mother's Voice*. There is a Mothers' Congress of New York City, and a Fathers' and Mothers' Congress in Brooklyn. It is very valuable to secure the united study of fathers and mothers. Brooklyn has set a good example.

The programme of an all-day meeting held in Brooklyn was, I understand, suggested in the main by fathers, and it was an excellent one, covering three general subjects:

1. Literature for children
2. Amusements for children.
3. Government of children.

In one of the New York public schools, of which Miss Julia Richman is principal, mothers' meetings have been held every two weeks. These were reported in the *New York School Journal*, April 17.

The committee on child study of the Associate Alumnae of the Normal College has a round table for mothers. The books studied have been Tracy's "Psychology of Childhood," Sully's "Studies in Childhood," and Baldwin's "Mental Development of the Child and the Race" begun. The books are read at home, and are the basis of discussions and written papers. Before disbanding, the round table prepared a list of topics to be considered during the summer, as "Children's Ideas of Nature," "Children's Preference in Stories," etc. Reports of actual observations during the summer will be given in the fall.

The New York Kindergarten Association inaugurated a mothers' class, which met once a week in Barnard College.

There is another society in New York city composed mainly of mothers, namely, the Society for Child Study, which has read and discussed together during the past seven years Rousseau's "Emile," Richter's "Levana," Locke's "Thoughts on Education," Spencer's "Education," and Adler's "Moral Education." These books have suggested many practical topics for discussion. More recently this society has been reading and discussing the biographies of great men, especially those whose childhood is known. They have also studied child characters in fiction.

Kindergartners have held many meetings with mothers, and Froebel's "Mother Play and Song" has been a never-failing source of inspiration.

The need now is to have definite lines of work arranged for leaders of mothers' clubs. The National Congress of Mothers invites correspondence on this subject. It is proposed to form a bureau of exchange, and through this to get all the information that is necessary to conduct a mothers' club in any community. (Address the Washington Loan and Trust Building, Washington, D. C.)

This important work has also been attempted by the New York University Society for Child Study, of which Dr. James P. Haney is president and Miss Ella Keith, secretary. One of the round tables of this society has in view the compiling of a report which will aid those desiring to conduct mothers' meetings. The following topics have been assigned to different persons for investigation: methods of holding mothers' meetings; medicine and hygiene; food and clothing; discipline; children's interests; statistics and history of child study.

Under the first head, "Methods of Holding Mothers' Meetings," Miss May Mack-

intosh reported during the season upon parents' meetings, from the teachers' initiative; from parents', mostly mothers', initiative; in public schools (city); in private schools; in country schools; in university settlements.

Medical talks, such as could be employed in addressing mothers' meetings, have been topically outlined by Dr. Haney. When these reports are complete, I understand that they will be published, and I am sure will be very valuable.

In closing, let me say that I am personally deeply indebted to mothers and fathers for the help they have given me in child study. I have sometimes sought the acquaintance of the mothers of noble young women among our normal students to discover, if possible, their happy secret of government. I may say here that, in at least two such instances, I was impressed mainly by the parents' ease of government and the confidence expressed in the children themselves, which suggested to my mind the value of a wise "let-alone" policy in the management of children.

CRITICISMS WISE AND OTHERWISE ON MODERN CHILD STUDY.

BY DR. JOHN DEWEY, THE UNIVERSITY OF CHICAGO.

The features of child study against which criticisms have been justly directed are the results partly of the exaggerations incident to all large movements in their inception, partly of the misdirected gyrations of those camp-followers who, hanging about education as about all other progressive forces, attempt to use child study for their own advertising and aggrandizement, and partly of the unwise zeal of those who, lacking in stability, are blown about by every new wind of doctrine and lose the just perspective.

Many of the criticisms which have justification are caused by the premature assertion on the part of some that the child-study movement was to afford a new, certain, positive, and scientific basis for education, replacing all the supposedly tentative and speculative foundations hitherto built upon. When the proposed revolution failed to materialize, and teachers found that, as hitherto, they had to rely upon good judgment, personal experience, and a knowledge of the ideas and practices of others, many felt that they had been fooled, and turned from an indiscriminate worship at the shrine of child study to a condemnation equally indiscriminate.

Many of the criticisms proceed from a failure to draw the lines carefully between those aspects of child study which belong to the province of the scientific investigator and those which interest the educator. It takes time to develop scientific method, to collect and sift facts, to derive theoretic conclusions. There is no more sense in attacking the scientific investigator in this line because he doesn't provide on demand usable

recipes, ticketed and labeled for all pedagogical emergencies, than there would have been in attacking the early pioneers in electricity because they worked quietly in the laboratory upon seemingly remote and abstruse subjects instead of providing us off-hand with the telegraph, telephone, electric light, and transportation.

Another source of criticism has been the undue isolation of child study from the sciences upon which it is dependent. The only excuse for making child study a thing by itself and attributing to it a unity of its own is not that the child is a unique fact separate from others, but simply because it presents a focus to which principles of physiology and psychology may be directed. When those ignorant of or disregarding these larger sciences plunge directly into child study and expect to get valuable results, the method is quackery, and the outcome confusion. As Professor James is reported as saying: "You could get a great many interesting anecdotes and peculiar facts together by starting out upon an indiscriminate study of adults. It would have just as much and just as little scientific and practical value as similar child study. I may add there is a fear of theory, of speculation, of hypothesis, which is as absurd as pure speculation divorced from fact. The mere collection of facts, uncontrolled by working hypothesis, unenlightened by generalization, never made a science and never will. I plead for a closer union of child study with general psychological theory." In conclusion, the speaker said that child study interpreted simply as one direction of general physiology and psychology had two things to do for education. One is furnishing certain generalizations regarding the order of growth, etc., a line well illustrated by Dr. Halleck's paper of yesterday. This is of general use in determining the whole scheme of education, but to the average teacher it will be of use in giving insight into individual children and ability to interpret their individual needs and temperaments. Its final value for the great mass of teachers will be measured by the extent to which it enables a teacher to see more accurately and adequately into the different individual pupils that present themselves. Mere general theories and mere facts *about* children are no substitutes for insight *into* children.

DISCUSSION.

DR. B. A. HINSDALE, University of Michigan.—It is surprising that the child-study movement should gain such momentum as it has in so short a time. This statement may, however, be misleading. Men and women have been studying children ever since there were children. We schoolmasters are likely to let any matter which comes before us for the first time in a conscious way receive too great emphasis, relatively. What we mean at

the present time by child study is a scientific study of children. It is the handling of facts and so forth, according to particular method. In the technical sense it is a recent movement. I am by no means satisfied that the average teachers in the schoolroom will find the scientific study of children the most fruitful method. They are apt to load themselves down with a machinery of methods that will prevent their accomplishing any fruitful results. This is not to be understood as condemning scientific method. Through scientific method very valuable and useful results can and will be reached. Much that has been recently published on this subject belongs to the curious rather than the useful, but, if we are not in too great haste about the results, we shall in the long run get together material that will inure fruitfully and to the advantage and benefit of pedagogy. So far as the average teacher is concerned, the most valuable result will be the reaction upon the teacher. A new habit of mind will be brought about, and the teacher will be put into new relations to the child, and it is out of this that the large benefit is to come.

A NATIONAL SOCIETY FOR CHILD STUDY.

BY DR. C. C. VAN LIEW, ILLINOIS STATE NORMAL UNIVERSITY.

[ABSTRACT.]

I shall be very brief, telling merely what has been accomplished. Four years ago the Illinois Society for Child Study was formed. It was soon followed by organizations in other states, for example in Minnesota, Iowa, Michigan, and Indiana. The societies that were formed after the Illinois society found difficulty in getting literature before teachers and others. In this respect the Illinois society, having been organized first, had a decided advantage, as material was published by the society and distributed to members of the society in all parts of the country. Owing in part to this difficulty, already alluded to, the call came from various states for a plan of co-operation. The work done in the various states has been valuable in that persons who were fitted for guidance have come forward and given assistance. Again, many of the facts discovered have been printed and placed before all. An interest has been aroused among parents in many sections of the country. All these things, and more, have thus far been accomplished, and it now seems desirable that some plan of co-operation of the entire country be devised. For this purpose, last year, at the meeting in Chicago, the North American Child-Study Conference was organized. There are, however, some points of difficulty that present themselves. A committee was appointed last year by this body looking to the formation of a national society; but it is evident that there could not be two national societies. It does not matter which society carries out the work. Is it not feasible to bring about a union of organizations, so that the field shall not be divided?

DEPARTMENT OF PHYSICAL TRAINING.

SECRETARY'S MINUTES.

FIRST SESSION.—THURSDAY, JULY 8.

The meeting was called to order in West Side Turner Hall at 3 o'clock by the President, Miss R. Anna Morris, who delivered an address on "The Individual."

Dr. W. O. Krohn, of the University of Illinois, followed with a paper on "The Development of the Will through Physical Training."

Owing to the absence of Mrs. Frank Stuart Parker, the subject of "Delsarte and His Contributions to Physical Education" was presented by Mrs. Anna P. Tucker, of Cleveland, O. The discussion was participated in by Mrs. Leiter, Misses Bancroft and Kimberlin, Messrs. Arnold and Butterworth, and others.

A paper on "The German System of Gymnastics" was read by Professor Carl Kroh, of Chicago Normal School, and was followed by a discussion, led by Dr. E. H. Arnold, of Yale University.

The following committees were appointed :

On Nominations — Dr. E. H. Arnold, Miss Rebecca Stoneroad, Miss Jessie Bancroft.

On Resolutions — Mrs. F. W. Leiter, Miss Ellen Le Garde, Miss Clara Baer.

SECOND SESSION.—FRIDAY, JULY 9.

The session was opened at 2:30 P. M., by a class in "Swedish exercises" from the State Normal School at Milwaukee, led by Miss E. W. Shrieves.

Superintendent Aaron Gove, of Denver, read a paper on "Elementary School Hygiene."

Dr. J. M. Green, of the State Normal School, Trenton, N. J., then spoke on "The Normal-School Plan of Introducing Physical Training into the Public Schools." The discussion following was led by Mrs. Francis W. Leiter, of Mansfield, O.

The next number of the programme was a symposium, in which the supervisors of physical training of various cities took part. Those participating were : Miss N. D. Kimberlin, Detroit, Mich.; Miss Rebecca Stoneroad, Washington, D. C.; Miss Jessie Bancroft, Brooklyn, N. Y.; Mr. Henry Suder, Chicago, Ill.; Miss Ellen LeGarde, Providence, R. I.; Miss Clara Baer, New Orleans, La.; Mr. Geo Wittich, St. Louis, Mo.

A paper on "Physical Training in the Colleges" was read by Dr. F. E. Leonard, of Oberlin, O.

Acting on the report of the Committee on Nominations, the following officers were elected for the ensuing year :

President, Dr. C. E. Ehinger.

Vice-President, Miss R. Anna Morris.

Secretary, Dr. H. B. Boice.

The report of the Committee on Resolutions was received, as follows :

Believing that a developed, disciplined body is essential to the highest success of the individual, therefore,

Resolved, That systematic physical education should become an inseparable part of the education which a state gives its children.

As a means to this end, we believe physical education should become required work in all educational institutions for the training of teachers.

It should be given ample space, under capable instructors, in all county teachers' institutes and schools of method.

As a department under the National Educational Association, we are committed to no special system or method; with united, harmonious purpose we desire to secure better physical conditions for rising generations.

We heartily express our thanks to the turners of Milwaukee for their fine exhibition of German work in the Exposition building; to Miss Shrieves, of the Milwaukee State Normal School, for her contribution to the regular programme of class work in Swedish gymnastics; to all who participated in the programme; to committees and individuals aiding in any manner the success of the Department of Physical Education of the National Educational Association; to the turners for the use of the Turner Hall; and to reporters for courtesies received through the press of the city.

We desire to express our sincere thanks to Miss R. Anna Morris, our retiring President, for the faithful, able service she has given this department during the past two years.

It is to her untiring efforts, wisely directed, that we owe the creation of this department, articulating so important a phase of education with the established educational interests of the country.

On motion, the department adjourned.

H. B. BOICE,
Secretary.

PAPERS AND DISCUSSIONS.

THE APPRECIATION AND DEVELOPMENT OF THE INDIVIDUAL.

BY MISS R. ANNA MORRIS, SUPERVISOR IN PUBLIC SCHOOLS, CLEVELAND, O.

During the last few years mankind is more and more beginning to appreciate itself. The growing interest in all humanitarian questions foretells the turning of the tide of thought from the all-consuming study of science, as pursued in the last century, to the study of *man himself*. Educationally considered, the proper study of mankind seems to be the study of the individual child. This consideration, which has entered into education through the kindergarten and child study, leads us, as teachers, to ask: What conditions are best fitted to develop a great personality? Let me answer: First of all, it is the attitude of truth to one's own self, even though that self be young. It matters not what we may seem to others, but to our own selves we must be true, and, being what we are, mentally, morally, and physically, let us be it as nobly as we can. It is not so much what is gotten by inheritance as it is what one does for himself that makes the individual character.

"What from your father's heritage is lent,
Earn it anew to really possess it."

"The question," says Shakespeare, "ought not to be, art thou in nobility? but, is nobility in thee?"

The ideal individual is a harmonious composite of the physical that sustains, the mental that guides, and the moral that impels. I place the physical first, because the whole career of individual usefulness is conditioned on a physical basis. One may have a strong mind and a great soul, and yet, if he is weak in body, he cannot realize the full possibilities of a great being. It is not necessary that the physical be athletic or strongly powerful, but that it be an entirely obedient agent, in whose bulk, contour, and expression we see guiding, impelling, and sustaining power. The trinity of self-knowledge, self-reverence, and self-control will give an individual sovereign power over himself. Some one has said that the poorest education that teaches self-control is better than the best without it.

Along with the establishing of moral judgment and the realization of truth, the development of individual will power should occupy a prominent place, for will power is the great need of this age. We lack people who have determined purpose and physical endurance enough to carry out the good impulses they may have, and who have courage enough to declare truth greater than the reign of things that are.

Physical training will develop the will; in fact, it is the training of the highest kind of will power, for it teaches self-mastery and puts one in possession of himself. In this age, to carry the burden of civilization requires that the individual be put in possession of all his powers, so that he may meet the needs of the great tasks of life. He should regard no physical or mental accomplishment as insignificant, for, as Emerson says, "A man may be a success because he has power of eye," and, we may add, graciousness of manner, dignity of attitude, and courtesy of tone and inflection. There is more weight in a look, word, or gesture than in a command, and more controlling power in the atmosphere around the man than in what he says. Some men are kings of men because they are masters of themselves. They need not assert themselves, because their presence alone is power. They are great, not only because their spirits are great, but because they have wills and bodily control enough to express greatness.

Believing that physical expression has much power, and that it should reveal the true inward character, and that it is based upon the free use of the body, I would place physical training as a principal element in the education of a child.

But the question that comes to those who have given the subject of physical education special study is: How can we as teachers plan our work on a scientific basis according to the established principles of teaching and strive for the development of the individual in his composite and related existence? We feel the need of such a training as will establish the best possibilities in each individual; one that leaves no muscle

undeveloped; one that trains the body to respond to the command of authority, whether it be the dictates of his own or another's will; one that will react favorably upon the emotions and instincts, and assist in forming the right habits of doing well the acts which are constantly repeated through life; one that at times includes games and devices for arousing enthusiasm and jollity; one that recognizes the necessity of training the voice, and one that has regard for the expression of movement and grace of manner; in short, one that brings the child into a knowledge of the relation between his mind, feelings, and body, and develops in him an individual responsibility for the use and care of his entire being.

As a department in this National Educational Association we stand for the cultivation of the basis of the individual, and concerning this we will confer. We have come together, not only for the gaining of professional wisdom, but for the uplift and enthusiasm which come from the exchange of thought, and for the fraternal friendship which we hope will glow and burn in our midst. In this atmosphere we will bring our work into an educational relation with other branches, and reach ideals impossible to attain while struggling alone in our respective fields of labor. It is the principle of our department to advocate no special scheme or method of training, but to keep our minds and hearts open to the best in all, ever considering the child as the essential element to be studied, and who must be interested in himself to the extent that he will work for himself. Through our efforts may humanity be taught, in some degree, how to better appreciate the individual, which is the supreme element of value in all the world!

THE DEVELOPMENT OF THE WILL THROUGH PHYSICAL TRAINING.

BY WILLIAM O. KROHN, UNIVERSITY OF ILLINOIS.

No subject in the domain of modern psychology is more difficult of treatment than that which is ordinarily indicated by the term volition. At the same time, it must also be said that there is no subject of more importance, for the true understanding of the evolution of will power—the genetic history of will—is necessary in the most simple attempts at an analysis of personality, and no understanding or comprehension of the more purely intellectual idea and moral concepts is possible without clear knowledge of the development of will. To employ an oft-used figure, we might say that, as in Greek mythology Eros was made one of the oldest

and, at the same time, one of the youngest of the gods, so in psychology the will may, according to the point of view we take, be represented as the most primitive or the most complex and derivative of all the mental products. If by will we mean only that power which manifests itself in action from deliberate choice alone, then we must maintain that there has already been a rather extensive development in the individual's mental life, for such will-acts as are here signified cannot exist in the lowest forms of the sentient consciousness. To understand the true nature of will, it is absolutely necessary to give its genetic history, that is, we must go back to the primitive germ and trace it in its path of development from the unconscious to the conscious, from the most purely involuntary movements to those that are more refined and intricate as examples of deliberative choice. Activity is a fundamental property of conscious life, and if any one of the elements of consciousness—feeling, knowing, willing—is to be regarded as the original form of conscious life, it must be the will, for the manifestations of the intellect and feeling never acquire their fullest significance, their deepest meaning, except when they serve as links in the chain that leads to action. Without education of the child's will it is next to impossible to improve his mental, moral, or physical well-being in any respect.

We must do away with those narrow conceptions of the educative process, and the limited range with respect to educational ideals, that would effect its results by little, semi-occasional accretions of knowledge. Education, to be education at all, must influence the whole personality and not a little segment. Education, with all the artificial glamor that can be added unto it, with all its frills and furbelows, when reduced to its lowest terms, is nothing more nor less than the development of the capacities of self-direction and self-control, both of which are nothing more nor less than phases or attributes of the developed will. Are we in full sympathy with the broader pedagogical creed which maintains that education means nothing more nor less than to make the finest specimens of manhood and womanhood possible, to produce an individual rich in strength, going on from strength to strength, developing the child to its fullest maturity in ability and power? Or are we more in sympathy with a narrow-chested, anæmic creed, something like that expressed in the following little piece of didactic lesson-making? It might be headed, "The Educated Girl":

See the little girl!

Is the little girl educated?

The little girl isn't a thing but educated.

The little girl has been to school during a series of years and learned to paint a hollyhock.

Why does the little girl spend so much time weeping?

The little girl weeps because the hard, cruel, thoughtless world doesn't match her hollyhock.

The term education, as now used, can no longer be identified with mere instruction. A broader meaning has been developed, and the person who endeavors to maintain that learning is an end in and of itself, rather than a means to an end, soon succeeds in driving a team of horses through his own reasoning. Rather is it easier to believe, with Rosenkrantz, that education consists "in that emancipation of youth which puts him on his own feet."

The quintessence of education lies in action along the lines that develop the power to do, discern, and think, and in the inhibition of those activities that would negate and offset the development of this capacity for beneficent action, clear discernment, and effective thought power. We are led to emphasize the motor side of education—self-control and self-direction, because we believe the most enduring results, as well as the most potent educational facts and forces, are created through action.

The plan of this paper embraces a twofold aim:

1. It is our purpose to pass in brief review the natural history of will. Through what stadia do we pass in the unfolding of our personality before we possess the power of self-active, self-directive, and self-controlled energizing—in other words, volition—in its highest and fullest sense?

2. In what way does physical training of the right sort assist in this development?

It is easy to see that the earliest movements of the child are not voluntary, but are only reflex, instinctive, and impulsive. The early movements of the child are no more voluntary actions than is the movement of the aspen leaf, of the brook splashing over the rocks as it tumbles down the mountain side, of the stone that flies from the boy's sling shot, or of the cannon ball as it describes its parabola of six or seven miles over the waves and across the water when hurled from the monster iron-clad at sea. The individual, the personality, must first have a clear, definite idea of the movement and the purpose of it before voluntary action can possibly be initiated. The difference between such movements as we see in the waving grain, the ebbing tide, the walking-beam of the monstrous side-wheel steamer, the ascending balloon, the falling meteor, the crashing iceberg, and the impulsive and reflex movements of the child, on the one hand; and, on the other hand, such movements as are exhibited by the wood carver as he cuts a design, the etcher as he traces a plate, the pilot as he steers his vessel, the marine as he "sights" the cannon, the astronomer as he turns his telescope upon the dimly lighted star, the child of five or six learning to weave mats at the kindergarten—is that the latter are voluntary actions or movements *plus* consciousness.

First we have the impulsive movements. By this group name it is

intended to signify that large class of movements which take place without the presence of any external stimulation, without any sensory arousement to which the organism need make response. They are, of course, entirely outside the domain of conscious attention and are, therefore, distinctly will-less movements, being merely the result of an overflow of nervous energy.

Second, the reflex movements, those movements that form so large a portion of the early manifestations of activity on the part of the infant, especially in the early days of child life. Neither do these reflex movements involve the least degree of attention or conscious control. In fact, they involve just the opposite. They, too, are characterized by an utter absence of the subject's power of attention or conscious effort.

We have, in the third place, what are called the instinctive movements. These instinctive movements constitute the majority of the activities in which animals engage, and are found to embrace a large number of the movements which human beings manifest.

Finally, there is that large class of movements which are the pure results of deliberative choice, action in the truest and highest sense—voluntary action, which is, indeed, one of the essential characteristics of personality. No such thing as personality is conceivable without the power of self-direction, this action from motives and ideas towards aims and ideals. In this class of movements we have as essential features the desire of an end to be attained, concentrated attention upon this object or that, the imagining of this desired end before the mind, the picturing of the means to be employed in order to achieve it, and a forth-putting of energy in order that the desired end may actually be attained. These movements are really *bona-fide* voluntary actions, and we may call them deliberative or ideational movements.

Nearly all the movements that characterize the child's prenatal life belong to the class denominated impulsive movements. They constitute the larger number of acts manifested by the new-born child, as they do in the new-born animal. In the new-born child as in the new-born animal the impulsive movements embrace all those spontaneous kickings, rollings, lip-suckings, cooings, jerkings of the head and arms, as well as the comical grimaces, all of which are such a paramount feature of the early weeks of infant life. The little fists are tightly clinched, the arms are continually performing wild, sweeping movements, the hands are moved toward and from the face, toward and from each other, without being prompted by any definite purpose; in fact, nearly every muscle of the body is called into activity without the presence of any sort of external stimulus. Most of the impulsive movements, indeed nearly all of them, disappear by the end of the child's second year, though some of them, like yawning or gaping, persist through life. Seemingly many of the impulsive

movements are unexpected by the child itself. While these impulsive movements in themselves are not volitional actions in the true sense, they show that the organism is a little world in itself, with the power of creating motions from within, and that it does not need to wait for external incentives to set it into activity. These impulsive movements are, indeed, the raw material which in the progressively unfolding will are so wrought upon by the child in its incessant activity that they are finally molded and transformed, with the help of the other powers of the mind, into the highest type of deliberative actions.

Close upon the heels of the spontaneity which is manifested in the earliest stages of existence as a natural efflux of a superabundance of life, close upon these earliest self-movements in the path of development of the organism, irritability manifests itself. By irritability is meant the power of responding to an external stimulus. By reflex movements, then, we mean those that occur as a response on the part of the nervous system to external stimulation, without any participation of self-consciousness or the presence of any deliberation or choice. They never enter into consciousness during their performance, though sometimes we clearly remember them after they have been performed. These reflex movements are found in the adult as well as in the child; for example, the quick start on hearing the sudden report of a gun discharged near you, the quick withdrawal of the hand when one is picking berries and suddenly observes a snake coiled up in close proximity, or the startled jump made by a boy as he gets into bed and his feet come in contact with a cold, clammy banana skin, surreptitiously placed there by a mischievous mate.

We see, then, that while reflex movements are not brought about immediately or directly by the internal state, but by a stimulus from the external world, they are, nevertheless, purely mechanical; they are most certainly not the result of conscious deliberation.

Reflex movements are of the greatest importance and far-reaching significance in will development, for on them the strictly voluntary movements are immediately dependent.

In so far as a line can be drawn between the reflex movements and the instinctive movements, it must be by saying that the latter are more complex, more active, and more conscious than the former. Instead of the momentary nervous discharge so plainly manifest in the reflex, as well as the impulsive movements, there is a direction of the activities to a more or less distant end. Stimulus is required in order to set an instinct to work, but the kind of action is determined far more by the motor tendencies implanted and habits inculcated in the individual than in the nature of the stimulus. The stimulus serves only to open the valve, that the motor tendencies may escape. The stimulus "presses the button," the reacting organism "does the rest."

We can best study the genesis of ideational or true will movements when we note how the will gradually brings the bodily movements under its control. This is the first important accomplishment in the course of the will's training, and it is so important that motor ideas must be considered as the basis of all conscious volition. To all external appearances action is directed from within outward, but even this presupposes an inner activity, a determining of the ideas by the thought of an end to be attained. The thought of an end is the most important element; indeed, it is the distinguishing characteristic of all ideational movements. Passing over the impulsive, reflex, and instinctive movements in turn, we find that ideational movements are different from each and all of these, in that they (ideational) involve the previous portrayal or representation to the mind of an end sought, an object to be acquired, or an aim to be realized. It is only to such movements as these that the term "voluntary actions" can be applied. All the other classes are only movements in just the same sense that movements among physical phenomena are movements.

In the higher forms of will activity, then, we have the presence of motor ideas that are determined by the thought of an end or desired object. Certain conditions are essential in order that we may have these motor ideas. The first condition is that movements must be made which are felt. This shows that ideational movements exist only by virtue of the spontaneous, reflex, and instinctive activities. Impulsive and reflex movements constitute the material which serves as the basis of our motor ideas. A motor impulse always presupposes the memory of an executed movement, which really consists in recalling the appearance of the previously executed movement or in remembering the previous motor sensation itself.

How does physical training of the right kind assist in this development of will?

In the first place, systematic training cultivates a series of motor habits that are of immense value in the economy of human action. There are four good reasons for making as many as possible of our acts habitual:

1. Habitual actions are performed with greater accuracy than are our other movements. The piano player and the rapid typewriter are illustrations of this fact.
2. Habitual actions require less mental effort, are performed with less labor, saving a large amount of energy for necessarily new adjustments. Habit is the greatest labor-saving device known to the mind.
3. Habitual actions are less fatiguing than other forms of movement.
4. Habitual actions are performed in less time.

In the second place, physical training that occurs in accordance with the periods of growth establishes a set of enduring motor clews—of motor

remembrances—that cannot help but be of the greatest advantage in the higher development of will power along the lines of self-direction and self-control. The organism, well trained, becomes so well adjusted to every possible condition of action, is so adapted to every wind of circumstance, that the individual thus trained realizes that he is master of conditions, and not a log drifting down the stream of time, a rudderless bark moved about by the wind of other men's breath.

In the third place, physical training, in emphasizing the motor side of education, makes possible a larger degree of attention and more intense interest, both of which react directly on the will power. Strongly concentrated attention that is effective for mental development can only exist in connection with activity of some sort. Mental effort, which is what we mean by attention, is intense only when accompanied by some sort of physical expression. Furthermore, this physical expression, this bodily activity, leaves in its wake the most potent memory clews.

In the fourth place, physical training presents each exercise as a whole, as an entire, complete thing, to the child. To the teacher each exercise does not appear as a whole, but in relation to some other exercise. But to the child each exercise, whether with wand or dumb-bell, is for the time being a whole, an entirety, a complete thing. This gives rise to a thorough organic interest, to a complete brain thrill.

In the fifth and last, but not the least important, place, among the reasons presented within the narrow limits of this paper we must remind ourselves that nerve cells in the human body are created to do three things: (1) to generate energy; (2) to discharge energy; (3) to inhibit or control energy.

In educating the child our chief concern must necessarily be the development of the last of these functions. That education is at fault, indeed does not educate at all, that fails better to organize the inherent capacity of inhibition and self-control. And what can be more important, more effective, in bringing about this development and organization than physical training? Observe, if you will, the beautiful self-poise induced by such training as is given, from time to time, in the classes that meet in this building. This is but a fair example of what is taking place in the best schools all over our broad land, all of them co-operating in making the individual more complete, in that they develop powers of self-control and self-direction that would otherwise lie dormant. What is more contemptible, what is more despicable, than the individual of weak will, the man without a purpose, hugging the earth and groveling in the dust, refusing to rise because his innate strength of will has remained undeveloped? What is nobler than the individual who, conscious of his strength of will, rises above every circumstance, knowing by experience that the higher he climbs the mountain of difficulty, the broader the horizon and the more

beautiful is the view? What the world of today requires is not mere goodness, but strength. We are not so much in need of psalm singers as individuals who are veritable engines of truth. There is large need of individuals of unfaltering energy, of definiteness of purpose; in other words, strong, complete personalities. Such products only result when these bodies are judiciously and thoroughly trained, so as to furnish ample and complete physical basis for vigorous thought and health-giving morality. Then it is that we have the individual of heroic mold.

“What makes a hero? An heroic mind
Expressed in action, in endurance proved;
One glorious triumph of the heroic will,
One self-approval in his heart of hearts.”

The wonderful influence exerted by the Christ when he was on earth was not merely because of the fact that he was the best man that ever lived, but because he was also the strongest personality that ever existed on the earth. What is the sort of individual, the sort of product of our schools, that this day and age most demand? Let the poet Holland answer:

God, give us men : a time like this demands
Strong minds, great hearts, true faith, and ready hands.
Men whom the lust of office does not kill,
Men whom the spoils of office will not buy;
Men who possess opinions and a will;
Men who have honor; men who will not lie;
Men who can stand before a demagogue
And damn his treacherous flatteries without winking;
Tall men, sun-crowned, who live above the fog
In public duty and in private thinking;
For while the rabble with their thumb-worn creeds,
Their large professions and their little deeds,
Mingle in selfish strife, lo! Freedom weeps,
Wrong rules the land, and waiting Justice sleeps.

DELSARTE AND HIS CONTRIBUTION TO PHYSICAL EDUCATION.

BY MRS. ANNA P. TUCKER, SCHOOL OF EXPRESSION, CLEVELAND, O.

Much has been said and written for and against Delsarte. Those who have given it study, believing strongly in its possibilities, regret that there should ever be a teacher who, mistaking the form, such as posing and æsthetic gymnastics, for the spirit, has put these forth as Delsarte, instead of using them simply as a means to an end, and that end the cultivation of the individual according to a larger ideal; for “The material form is but

the effect of the spiritual idea." The limitations of the Delsarte philosophy are to be found, not in its truths, but in the work of its promulgators, many of whom have made it synonymous with cheese cloth and posing, or have claimed for it the literal conferring of perpetual youth, the putting-on or taking-off of a given amount of *avoirdupois*, or some other absurdity. A great thinker along these lines has aptly said: "The limitations of our knowledge of Delsarte is one thing, the limitations of Delsarte another." What, then, is this philosophy? It is simply an æsthetic translation of the Greek philosophy presented by a Christian philosopher, for Delsarte's teaching includes God as a factor and desires not only bodily power by practice, but bodily power by moral habits. The subject represents an ideal standard, but is very practical in benefits conferred, as I can testify by a number of years' experience in teaching the Delsarte philosophy as a basis for physical culture.

Delsarte was an observational, an inspirational teacher, who sought universal truth in a close study of life and art. He did not, it is true, found a system of gymnastics in the ordinary acceptation of the term, but he declared the principles underlying all true gymnastic training. By a knowledge of the Delsarte principles and the power to impart them we are enabled to teach muscular control, power through repose, grace, rhythm, and correct poise. The last element I would name as the great vital necessity in any system of gymnastic training. "Strength at the center" is not alone a Delsarte law, but a great natural law of growth. Everything depends upon the control and exercise of the trunk and a perfectly correct poise of the body. Let us remember that health and strength are not always synonymous, for a man may even possess strength at the expense of health. In many gymnasiums (and here let me say I am not decrying that work, only asking an impartial consideration of the subject) I have noted, even among advanced pupils, students capable of performing exercises of a most difficult nature, who seemed to have no knowledge of poise at all. If taught, it was not made sufficiently clear to become a factor in their lives. Few teachers realize that poise is not alone a physical, but a moral truth, dependent primarily upon the imagination. Here lies the distinction between the mechanical and the ideal gymnast. The former, eliminating the emotional element, becomes absorbed in the mechanism, forgetting that muscular control depends upon mental life, while the latter believes in controlling the muscular by mental and emotional activity. Mechanism is a necessary part of physical education, but it is *only* a part; it is the ever-present soul, animating the body, which should incite the mechanism and rises superior to it. It seems to me the prime result of physical education is to create power, and grace, which is modified power. Power depends upon control of the trunk, especially at the waist. This result is largely obtainable by the Delsarte

method, or ethical physical training. Delsarte's law of strength at the center, flexibility at the extremities, when properly applied, imparts vigor, sinewiness, and grace.

Another strong factor in Delsarte's teaching is the belief in slow movements. "Dynamic wealth depends upon the number of articulations brought into play." This, also, has received ridicule, but, in normal states, nature indicates measured rhythm, from the beating of the heart to the fluttering of a leaf. With this agrees Mr. Stanley Hall, when he says: "When you can substitute in the body a deliberate motion and rhythm of work and speech, you are substituting a healthy for a morbid and nervous diathesis." The believers of mechanical work may claim that Delsarte's theory belongs to the field of expression, and call it a vagary, and hold it in derision, but what is expression but the highest form of gymnastics, natural gymnastics, so to speak? It is "the visible unfolding of the soul," says Delsarte. Professor James, of Harvard, a conservative of conservatives, in his recent work on psychology states that the emotions and their bodily symptoms are identical as far as our consciousness is able to analyze. Through exercises formulated in the carrying-out of this philosophy we gain health, symmetry, and freedom of action, which mere athletic gymnastics fail to give. Many times the most difficult pupils to develop in poise, self-control, and power of movement are those who have taken a course of training which has made their muscles hard and inflexible, their movements ungraceful and angular. The Delsarte method teaches the art of withdrawing the natural nervous force from the extremity to the center, thus enabling us to control that force by action of the brain, and to use it at will in control of the muscles. This imparts not only muscular control, but concentration, a wise direction of will power, and relaxation from nerve tension. Those who become absorbed in mechanical gymnastics lose sight of the idea that the most forceful and useful exercises are those which project themselves into the daily uses of the body. For the natural gymnastics are those which arise in the daily expressive use of the body. Take, for example, the use of the voice; how large a part of our social life is dependent upon speech, which would be impossible without the muscular power of taking and expelling breath and the movement of the muscles of the larynx, yet how few persons are taught to conserve or control this force! Or how many teachers realize that the correct use of the human voice is a powerful physical exercise? This system, in giving us control of our bodies, arouses within us keener sensibilities, strengthens the emotions, and stimulates mental life, and the exercises, when correctly taught, are but a means to an end, which end is the full artistic outward expression of the inward life. It is the enlarging of the ideal and making possible the way to its expression, or the revealing of man's possibilities to himself, that I would term the *summum bonum*

of Delsarte's contribution to physical education. These possibilities are ideals, but we may dare to practice them. They may be made actualities by our own efforts. God blesses effort.

THE GERMAN SYSTEM OF GYMNASTICS.

BY PROFESSOR CARL KROH, CHICAGO NORMAL SCHOOL.

Whatever the retrospect of more recent date, the history of the past fifty years must disclose, in many interesting chapters, the story of the transmission of the germ, and the persistent cultivation of the not always congenial soil: the careful nurture attending the promising growth, and the ultimate development into a system characteristic, in all its features, for strength of form, beauty in the symmetry of its branches, and rich in the abundance of its fruits.

The cultivation has been a success, and it is not in an everyday humor that I would divert your attention for a few moments from the relevant matter of my discourse, to associate in your minds, with the doctrine of German gymnastics, the pioneers of German *Turnen*, whose love of liberty was the animus of that vast tide of German emigration of the early fifties which proved so valuable a factor in the development of our country.

The pioneers of gymnastic art, ever in the vanguard, recognized by virtue of their ripened experiences the dangers with which we were threatened, and are threatened more, perhaps, today than ever before. Never hesitating, they pointed the way to a better realization of our legacies, in that they directed their efforts with characteristic persistence to the perfection of a system by means of which there should become established a sense of proportion. Their ideals implied strong bodies, warm hearts, upright characters, complete manhood. The training they proposed was not for the physical body alone, but a training for the sake of man. Not a one-sided culture; heart culture ever appealed to the German *Gemüth*.

To them it was evident that to youth should be given more leisure than we allow, not only for the repose of mind so essential for a proper weighing of impressions, but also for that cultivation of genuineness so needful in accomplishing a life's purpose. With Goethe they believed: "Take thought for thy body with steadfast fidelity; the soul must see through these eyes alone; if they are dim, the whole world is beclouded."

May not we, as all others who have contributed their share in the arduous work of planning, organizing, and establishing, look forward to these recurring meetings, newly encouraged to add our mite to the study

engaging us? Should we not now, on the highroad to recognition by the greatest union of educators, after the many vexatious failures of the past, rejoice in the prospect of serious thought directed to the perfection of our educational system? Do not we see in this recognition of the birthright, of the privileges and rights of the boy citizen and girl citizen, a guaranty for the intellectual victories of the future?

Nature does nothing by jumps. Upon the one hundred and fiftieth anniversary of Pestalozzi, one of the first among educators to emphasize the need of physical training of children, the institutions of our land, from the primary grades to the universities, honored his memory in that the story of his career, his beneficent influence, was retold.

Froebel, whose sympathetic study of childhood led to the philosophy of the kindergarten, threatened with imprisonment and expulsion from Berlin on account of the menaces to church and state lurking in his doctrine, today is the revered of pedagogues. His memory is held dear in the schools of our land.

On the eve of a brighter dawn, when our civic federations shall have divorced the stultifying influences of thoroughly bad politics and politicians from the sacred environment of our schools; when the teacher will not need to make his obeisance in recognition of a vicious system; when his influence shall be estimated for its real worth; when educators from all sections of our country turn their attention to this side of physical education; when our wills shall have become invigorated with that sincerity which will lead toward better courses—truly, the outlook for a realization of our best hopes appears much brighter.

For, as truly as Pestalozzi and Froebel found in the little republic of Switzerland the conditions favorable to the advancement of their theories, so have we in this republic the conditions for unlimited opportunities. Emerson said: "America is opportunity."

It is the patient and honestly struggling teacher, then, who is full of inquiry concerning this phase of physical education.

Wherever teachers gather for information in state, county, or city institutes or conferences, interest is being largely directed toward two topics, child study and physical training, which are destined in a way, I am inclined to believe, to go hand in hand.

The final outcome will do away with much of the contention, confusion, and hesitation of which the makeshift of schoolroom gymnastics, to an extent, has been the source. Indeed, indications point to the leaders in the child-study movement, as the people interested in proper physical training, who eventually will become its strongest advocates.

We, for the moment, have not to do with aims beyond the common schools. Aims in the higher schools, we are told, do not suffer by the narrowing-down process in vogue for the formative period of youth, the

period of first impressions. The broadening of character is well insured where elbowroom for mind and body is not denied; where coveted glimpses of broad vistas, vouchsafed, are made possible. Grounds, equipments, teachers, appropriations, bequests, broad lands, campuses, playgrounds, etc., are considerations of first importance in our colleges and universities. But the records, however, of the physical examiners there employed reveal the neglects in our common schools.

We recognize, then, the demand of the teacher for information. In him we have the most responsible person in the community, who shapes the community that is to be. We recognize, as never before, that the art of teaching, the science of teaching, must illuminate our paths toward a better realization of our manifold opportunities.

Preparation, skill, devotion and consecration to conviction, experience—above all, right motive—must give quite another ring to the phrase, “physical, mental, and moral,” or “practical, intellectual, and æsthetical education.” Without these fundamental considerations, without the stimulating influence of this teacher, without the play of all the powers, the faculties cannot be developed. A system neglecting the fundamental consideration of the physical body, the instrument of all high thoughts and expression, is not representative of the higher and truer aims of education.

Our wondrous sight power enables us, if obstructions do not mar the view, to see almost at a glance what may become the study of a lifetime. We look again and again, and ever new significance is lent to the scene; recognition of hitherto unperceived content is had; we become richer in the compass of our view. As we accumulate strength with exercise, and our powers expand, so our temporary states determine the qualitative and quantitative contents of our images, of our ideals—a study of ever-enlarging scope and of deepest significance in determining our wisdom of and in things.

It is even so with the study of German gymnastics. Students of systems, who have earned their attainments in long service, devoted to earnest investigation and patient endeavor, who have in their mastery of matter and methods the reward entitling them to competency, will see the futility of any attempt to divulge such a system in the short time provided in a manner satisfactory to all who may be interested.

Discussed from almost every conceivable point of view by legions of contributors representing the best thought of earnest investigators, the German system of gymnastics has found its way into many lands far beyond that of the German schoolmaster to whom we are so much indebted. It is looked upon with acclaim wherever German thrift and influence have become manifest, *all wo die deutsche Zunge klingt*. Of such compass that a noted physiologist said of it: “In the vastness of this

German structure, built of an enormous amount of material, with beautiful and many-hued stones, and with rich ornaments, one becomes lost and confused"—or words to that effect—it must become apparent that German gymnastics were not born in the schoolroom. German gymnastics, however modified in the schoolroom, had their congenial soil in Dame Nature's school.

True physical education, as represented, whether in its modified or broader aspects, does not consider merely the improvement of the physique and maintenance of health; it is, rather, a training for the sake of the whole being. In its more "practical" aspects, as evidenced in perceptible results, it implies the recognition of procedures based on factors determining systematic "gymnastic development." The consideration of these factors properly belongs to the special study of gymnastics and presupposes some familiarity with certain related sciences. Its successful direction implies conscientious preparation, supervising control, effort in right directions, resulting in power appropriately to adapt and to interest. Persistent effort in practice and preparation, a resolute spirit ever ready "to do," to the exclusion of all superficial efforts, resulting in desultory work, must be directed toward the enhancement of all the pupil's powers.

Fulllest volition and the greatest possible accuracy in the execution of all gymnastic movements being of the highest value, should the work be educative, the study of the different forms of "gymnastic development" must serve the double purpose of enabling the teacher to exact a proper measure of effort to be safely demanded (in a consideration of age, sex, temperament, development—physical and mental—of skill of pupil or classes attained) and to inculcate an earnest desire for healthful bodily activity through interest aroused in increase of power, skill, and control.

The order of movements and exercises, different in kind and effect, devised in accordance with general and specific purposes, embraces an endless survey, involving the whole muscular system; their consideration is based on physiological and pedagogical principles; their classification and adaptation depend on an intimate acquaintance with matter and methods.

A methodical study of the different branches of German gymnastics, for instance of tactics, or order exercises, with reference to their use as an economy in movement; the application of the rules of marching and facing to the individual, rank, body of ranks, columns, and colonnades; their application to the practical needs of classes during gymnastic work, division, and massing for group work or play; their use during and after vigorous exercise; the adaptation of the various forms to figure marching, running, and dancing; formations in ranks and files; transformations of bodies, etc.; the study of free gymnastics, or free-standing movements,

and all it implies, as a fundamental work in gymnastics, as a means of thorough development; the study of the various forms, leading from the simple to the complex, from the gentle and easy, along a scale of gradually increasing difficulty, to the more difficult forms of exercise requiring strength, control, and endurance, to those requiring skill and dexterity, implying the highest form of mental and physical co-ordination; their adaptation to general and specific purposes; the elementary, immediate, and advanced forms, leading to the "theme work," characteristic of German work throughout; the study of the various forms of "light gymnastics," with all the varied hand apparatus; of the forms of "springing" exercises, skipping, hopping, and jumping, and their varied combinations; the study of the forms of exercises adapted to outdoor work, competitive running, jumping, etc., pole-vaulting, putting the shot, etc.; of "antagonistics" in all the forms indicated in the survey referred to; the development of apparatus work, from the elementary forms to those requiring the greatest skill in execution; the games and plays, competitive and recreative, without end—cannot fail to impress the student with reference to its all-embracing nature.

The processes involved, embracing other studies equally interesting, have received almost exclusive attention to the neglect of the more important consideration of the practical methods of conducting the work. Had I the time, I would like to point out the fallacy of making every procedure subservient to this course.

Jahn's work, criticised by that master of modern school gymnastics, Adolph Spiess, was at first but an occupation of the season favoring outdoor work. Not until 1816, I believe, did Jahn address his first appeal for a covered gymnasium to the authorities. The various appliances known today were suggested in part by the natural obstacles encountered by his bands of youths on their long marches, rambles, and outings.

How he loved during these outings—*Turnfahrten*—to enter the towns traversed on his peculiarly planned routes, in the spirit which gloried in that individual freedom which knitted together the youths of his bands in bonds of steadfast purpose, united, with little of the order of the drillmaster to herald their advent, with nothing that would smack of submission to yoke of whatever kind—that spirit of purposeful action which moved Jahn, Friesen, Theo. Koerner, and Fried. Froebel at the head of the historic Luetzow's Freischaar, 1613!

German gymnastic art is directed against that "relaxation" advised in opposition to the natural methods of exercise, alternating in purposeful activity and its consequent states, described by GutsMuths as the result of work in the garb of pleasure, indicative of a disposition in harmony with all surroundings, and a consequent quiet and restful feeling of repose,

which contributes to our state of well-being, and which Ling has called a state of joyous disposition and peace.

It was this same spirit which prompted the plan of organization, wise in its details, which led to the development of an art, a plan as yet little discussed, so well directed toward the recognition of personal responsibility.

It has been asserted that the gymnastic instructor who must plan and organize for the school, who would place his faith in the plan evolved by Jahn, must fail. This is, perhaps, true at this stage of the development of the work in this country. The plan of Spiess, therefore, is regarded as the most feasible. The plan of class gymnastics, including all the forms, from free-standing movements to apparatus work and games and plays introduced by him, which stipulated that these lessons should be directed by the regular teacher, modified under our conditions, in that the specially qualified teacher shall conduct the work, the regular teacher participating in it with a view to eventual qualification—this plan, in the belief of the German teacher of gymnastics, who is also a student of other methods, is representative of the method best adapted to school gymnastics, and toward which they are aiming. Not until it, in a measure, has been realized can the plan of Jahn find recognition.

It might be of more than ordinary interest to state here that to Froebel's communion with Jahn in Leipzig were due his thoughts on "national traits and tendencies," expressed throughout his writings. Froebel, who later was the adviser of Adolph Spiess, received from Jahn his first impressions on the importance of physical training.

Can there be a question as to the importance of the problems involved in this question of gymnastics and their introduction? Equipment, organization, instruction, methods, embrace questions that will bear considerable discussion. Enlightenment in many directions is needed right away. Future occasions will furnish opportunities. The cry at present is for teachers, competent teachers. We can make but little headway without qualified teachers. What stand are our normal schools for teachers taking in face of the demands for an education of the body, mind, and soul?

It is in our normal schools that gymnastics must be recognized as an art, or a science, for educational and hygienic aims, taking into account the whole being, physical, mental, and moral, based on physiological and pedagogical principles, implying on the part of the prospective teacher an approximate knowledge of the relation of mind and body, enabling him to select from the rich fund of gymnastic knowledge work appropriate to the various ages and sexes. There exists no higher obligation for the authorities than to provide for its introduction and fostering care.

All arts have had their first stages in intuition ; then they rise in the thought and investigations of man to science, which in turn enriches art.

A prominent educator, in recounting the evils discerned in the wake of the mad struggle characteristic of our times, asked : "What may we fairly look for as the logical outcome of this marvelous development of the psychic powers unbalanced by the physical ?" To science is left the answer, from which it cannot escape.

That eminent authority on physical education, Dr. E. M. Hartwell, said : "Methods for testing, measuring, and setting forth the results of physical training belong to what promises to become a distinct branch of science." Physical education, as an expression in the strictly scientific sense, is based on a critical consideration of demonstrable physiological and psychological effects and relations. Its general and special scientific signification should be distinguished and determined. Are the psychologists aiding us in this direction ? Can the characteristic traits and tendencies of children, of youth, be studied anywhere to greater advantage than during the properly conducted gymnastic work on the field or playground ? Is not this remunerative study of vast importance in that through it is aided the teacher, confronted with ever new problems ?

In conclusion — and I trust my colleagues will bow assent — I believe, after all, the question of systems is one not always uppermost in the mind of the real teacher. It is the way of doing a thing right, and of continuing in that way, that is of vastly more importance. In this respect advocates of systems may safely close the breach and unite.

Personally, I would rather discuss any one phase of the work at once interesting and move to the point, than formally to speak in a general way on systems, for I believe, as did one of the best exponents of gymnastics that ever gave his life in behalf of a noble cause, Nils Posse, who said on a memorable occasion in the Drexel Institute in Philadelphia, where were assembled the exponents of the different systems and the leading educators of the country : "After all, the German system does not look so different from the Swedish."

DISCUSSION.

DR. E. H. ARNOLD, Yale University.—Mr. Kroh's remarks must be studied in connection with the little pamphlet issued. What impresses one most about the German system of gymnastics is the vast amount of material presented. Herein lies the secret of its success. He who wants to cater to the hygienic, developmental, and educational wants of children, youth, people in the prime of life, and old people, of both sexes, under the varying conditions of different climates, nationality, station in life, etc., must needs have a great variety of forms of exercises, if he is to keep the people interested. The

interest taken in exercise is of the greatest importance, for on it depends largely the effect of exercise. You may figure out most minutely the physiological effect of an exercise on paper and demonstrate it by experiment, yet find to your sorrow and great surprise that the effect so demonstrated will be totally wanting in practice. The mental and emotional effect in the last instance decides whether the exercise is going to be beneficial or detrimental. And as the change from one form of exercise to another is to our ever curious mind a pleasurable incentive, as the ancients attested by their adage "*Variatio delectat*," the number of exercises presented by any system of gymnastics bears a direct ratio to the effectiveness of its exercises, to the ultimate success of such a system. For if a system of gymnastics is to be of lasting benefit to a nation, one must be able to bring under its influence the young and old, the rich and poor, men and women; it must be applicable to common and secondary schools, academies and colleges, as well as gymnastic clubs. One of the main conditions of a good system is that it must be continued after school life. Then, in the period of growth, when occupation in industries and professions threaten health and growth, physical, mental, and moral, is really the time when gymnastics are even more of a necessity than in school. You can bring under the influence of gymnastics school children, whether the influence be for good or bad, but unless the scholar has been deeply interested in the art of moving, unless he has formed what one can call the gymnastic habit, your influence will cease the moment he leaves school, your gymnastics have served a purpose of school only and not one of life in its totality, you have forgotten one of the main principles of good teaching—that whatever is taught in school is not to be taught for the sake and purposes of the school, but for life. Therefore, that system of gymnastics seems to me to be the best which will so enchant anyone coming under its régime that, even after the compulsion of the school has been removed, he will ever indulge in the health-giving physical and mental activities of gymnastic exercise. If this is to be gained, we must present continually new movement problems, so that our gymnast may ever be interested, always be fighting novel obstacles, always be giving battle to his own lack of skill. Yet the new difficulties encountered with each new exercise must not be so great that the gymnast loses all hope of ever overcoming them. Gradation of the material is then a necessity from the very outset. Gradation of the gymnastic work of a lifetime is, again, possible only with a great amount of material. Such a gradation will be the more effective, the more forms of movements can be similarly modified by performing them in peculiar positions of the body. As the number of modifying positions, free standing, is limited, the use of gymnastic apparatus which allows the reproduction of the same type of movement in sheer endless variety, presenting it in all stages of difficulty, is of utmost importance and greatest help. The teacher is, however, not the only person benefited by such help, but the pupil is quick to learn by analogy what feature of the exercise decides its greatest or less difficulty. He learns to attribute these differences to the varying conditions of levers, momentum, gravity, etc., and thereby gets a practical insight into the art of moving. Having acquired this, he practices the art of moving, being careful to perform movements under the most advantageous conditions. He thereby avoids all undue effort and exhaustion, moving becomes thereby easy for him. Whenever we find that we can easily understand or perform anything, we like to practice the same art or accomplishment. So our gymnast, because moving is easy for him, loves to be active, loves to do things. This love for doing, for accomplishing, is not restricted to the gymnasium, but permeates all the abilities of our gymnast's life, be they manual performances in the pursuit of industries or arts, or mental activities in the professions. Life, being active work, no longer is a dreaded burden, but a pleasure. Our gymnast has left the ranks of that great mass of humanity that knows things, but does not practice them, and has joined the much more useful army of doers. He has fitted himself for life's battle and strife with one of the best defending and attacking arms—the art of doing.

ELEMENTARY PRINCIPLES OF SCHOOL HYGIENE.

BY AARON GOVE, SUPERINTENDENT OF SCHOOLS, DENVER, COLO.

I take it that the title "Elementary Principles of School Hygiene" is to be interpreted as applying to those rules of action which should govern the construction and conduct of the school as especially related to good health.

The first consideration concerns the construction of the house and the schoolroom. It is agreed that an important, perhaps the most important, element that contributes to robust physical vigor is healthful air for breathing. The limitations of this paper are quite too great for one to write in detail of the methods now in vogue for providing pure air in the school. Theoretically we have several; practically, so far as I have learned, none that reaches the ideal. It is certain that air once used in the lungs should be, upon expiration, at once taken away, either by bodily removal or by immediate change of composition; the latter is difficult to accomplish. Considering the two prominent systems now in practice for furnishing healthful breathing material to pupils in the school, namely, the one depending upon gravity, and the other using the fan for the moving force, the position of the school building, the relative position of the room, and the amount of air space at the service of the pupils, all help to determine which is the better. A small four- or eight-room building, surrounded by large open-air space of several acres in a country with not a specially damp climate, can afford to depend upon the older methods for ventilation without harmful results; but a building in the midst of a densely populated community, with little open space about, environed by a dense population, with the usual adjuncts for warming, for sewerage, and for water, demands extraordinary appliances, and, so far as I know, only air propelled by fans will serve the purpose. Life in the open air in the country, where atmospheric vitiation is impossible, affords the nearest approach to healthful breathing, followed by the vigorous functions that accompany the introduction of pure air into the lungs. The fan system would be improved if machinery could be so made that the possibility of stoppage or breakage was more remote. If the great ocean steamer, with all its intricate machinery, can be so carefully constructed that no screw, wheel, or pinion shall be found off duty during a long voyage of days, and even weeks, it must be possible for the engineer of our fan-ventilated houses so to construct the plant that a halt in movement can never occur. The requirement that a room with forty pupils shall be kept closed, nominally airtight, except the income register

through which is forced pure air of proper temperature, and the outgo register, through which the vitiated air is taken, makes it evident that the minute the fan stops the room quickly becomes a death trap. Personally, I am inclined to the notion of avoiding mechanical force for the furnishing of pure air whenever it is possible; and it is possible when the building is in a large open space; this means large rooms, never smaller than thirty feet square, and ample hallways, equaling in the floor space 50 per cent. of the house, and several doors habitually open from the schoolrooms into the hall.

The second consideration, which may be touched upon for but a minute, is the necessary habitual cleanliness of the room. The accomplishment of this depends upon the principal of the school, as he shall oversee and direct the janitor's work. Forty pupils from forty homes, daily entering the schoolroom in all weathers and in various conditions of dampness and of health, on retiring from school must leave behind them such an amount of possible disease as in the present day seems terrible, so that scrupulous attention to sweeping and dusting, with frequent resort to purification by water, is a necessity and follows one important principle of school hygiene.

The temperature of the room has much to do with the health of the pupils. The regulation of the temperature is one of the exasperating duties of those in whose charge it is placed—chiefly the teacher, secondarily the janitor. A teacher can scarcely depend upon himself to regulate the temperature of the schoolroom. An attempt to do this detracts from his attention in other directions. The gradual change of temperature in a room is accomplished so imperceptibly as to require special notice to be observed. Yet custom has furnished each room with a thermometer, and in a well-regulated house the temperature can be kept within four degrees of 70, anywhere along which line danger to health is not imminent. This work can be delegated to a pupil, who, by making the record every sixty minutes, causes the teacher to be reminded, if during his busy class work the temperature has become dangerously cold or harmfully warm. While evil results from cold-air draughts are, as we know, dreadfully exaggerated, in cases where disease and sometimes death follow illness of the child, the disposition is to assert that the misfortune was caused by the neglect of the teacher of the schoolroom. It is true that quite too little thought is given to the prevention of sudden changes of temperature in our schoolrooms. Middle-aged and elderly people have no hesitation in making known their dissatisfaction upon discovering a draught of cold air. Adults realize what physical disasters follow a sudden change of temperature, especially by the cooling of the air during sedentary employment. Usually in this world ignorance is as great a crime as wickedness. Teachers will do well to remember that

ignorance or neglect which is followed by physical disaster to another is criminal, and the result sometimes as woeful as that caused by the bullet from a loaded gun.

Following along close to cleanliness of the room, cleanliness of the individual must not be forgotten, for it is an emphatic part of school hygiene. One cannot look with much approval upon a recent venture in one of our great cities, where, with several thousand children barred from school privileges on account of lack of schoolhouses, one building can have an extensive bathing establishment, to make clean those who come to school unfitted for association with pupils. Yet there is some reason in the thought that leads one to give it some approbation. In every community are good people who can see at least one reform possible for the schools, and when these people have the requisite power, other interests, frequently more important, are sacrificed for the purpose of reaching the objective. So, I take it, if a city has money enough to build schoolhouses for all the children, and also to furnish a bathing establishment, it were well done. One can scarcely, however, approve of the bathing establishment for the few, while the many are vagrants on the streets.

All well-regulated school establishments prohibit the presence of pupils unprepared for association and contact in the school world. I have read recently of a case in our metropolis, where the parent objected to the exclusion of his child in whose head were discovered lice, defending himself on the ground that it was not unhealthful, quite the opposite. The extract which I read did not give the court's decision; but I am confident that more dangerous, insidious, harmful disease germs are abundant in the schoolroom than in the disgusting case mentioned.

The wet clothing of the children should be apart from the schoolroom. That recently constructed cloakroom, where the garments are hung on either side of a steam coil, protected therefrom by wire netting, with vigorous fan ventilation, is to be highly commended.

A few years ago one of our number presented to us the result of his microscopical examination of the material found beneath the finger nails of some twenty children. The reading of the result you remember was horrible, but the danger was doubtless exaggerated.

Occasionally the opinions of the parents and of the teacher differ with regard to healthful appurtenances, and it is no unusual occurrence to find a little sack of asafoetida hung about a child's neck for the promotion of good health, and prevention of contagion. This sort of conflict with the parents can have but one result, namely, the disagreeable pupil must be made agreeable. Some of our young friends would be very glad if such ruling could extend to foul breaths. When these breaths are the result of disease, the expulsion from school is possible, but when they are the

result of disagreeable, nauseous food, there is no help for the child in school any more than there is help for the adult in society.

In this Department of Physical Education any paper would be lacking point did it fail to refer to the physical training of the young people as a part of school hygiene. The programme which the President has so skillfully made, and with such eminent authorities, seems to cover the great field of physical education in a manner never before reached by any society in the country. My knowledge of Swedish, Delsarte, and German systems of physical training is too slight for me to utter a conclusion, or even an opinion. I have seen such excellent results in both the Swedish and German work, and personally have knowledge of extraordinary development attained under these two systems of training, and I have looked upon such elegant, even beautiful, exhibitions of Delsarte work, that I must repeat a sentiment to which I have given expression before, namely, it would seem that an eclectic or American system of physical training for our public schools should be the outgrowth of the present extraordinary activity along that line. It would be invidious to mention what one has seen, but scarcely a hearer of this paper sits before me without remembering, as I speak, of gymnastic work in different cities along the two special lines which I have mentioned, occasionally supplemented by the third, where the outcome is gratifying.

The present difference of opinion with regard to military training is well known. I classify myself with that number who proclaim their belief in the helpfulness, both spiritually, intellectually, and physically, of intelligent and reasonable military training for the young fellows. I have seen the crooked bodies straightened; I have seen feeble digestion strengthened; and I have seen lazy boys made prompt; all occurring during two years' training, of two hours a week, as members of a youthful military organization. I cannot say that this would not have been better accomplished in some other way, but I can say that I have never seen it accomplished by pure gymnastics under the rulings of either Swedish or German systems.

The elementary principles of school hygiene have something to do with the seating of the rooms. I do not care to discuss the two dozen or more forms of seats now in the market, including the adaptable, adjustable desks and seats. I believe our enthusiastic specialists from Boston, and especially the enthusiastic mercantile department that has the goods for sale, are unnecessarily vigorous in accrediting the evils of spinal curvature of the girls who spend several hours daily upon the piano stool to the unfortunate or peculiar size or shape of school seats and desks. I am quite in harmony with the expression of Superintendent Marble, who, a few years ago, told this association that in Worcester, Mass., they had, instead of adjustable desks, an adjustable boy who seemed to find it possi-

ble, without physical harm, to adapt himself to several kinds and heights and shapes of seats and desks, and yet, perhaps, there were no more spinal curvatures, round-shouldered men and women, crooked legs, etc., in Worcester than in any other city.

THE NORMAL METHOD OF INTRODUCING PHYSICAL TRAINING.

BY J. M. GREEN, PRINCIPAL OF THE STATE NORMAL SCHOOL, TRENTON, N. J.

My subject should really be, "The New Jersey Normal Method of Introducing Physical Training."

Since the first announcement of my theme, I have learned from the Secretary of this department that there was an existing controversy as to which was the better plan for introducing physical training, the compulsory or the voluntary. As I represent a normal school in a state where the voluntary plan is pursued, I have been selected to represent that plan.

Physical training is designed to teach three things, namely, the laws of good health, a good physique, and the subjection of the body to the mind.

The laws of good health imply a knowledge of respiration, the kind of air that should be breathed, which implies a knowledge of ventilation, sanitation, etc.; also a knowledge of digestion, the kinds of food that should be used, their nutritive qualities and how to secure them, rest, recreation, etc. Furthermore, good health requires a knowledge of proper clothing, healthful temperature, bathing, and general exercise.

To secure a good physique requires a knowledge of the physiology and anatomy of the human being, and of such exercises as will secure a symmetrical development of all of the muscles of the body, that each may perform efficiently its particular part in the organism.

The thorough subjection of the body to the mind requires a training in quick physical response to the mental mandates that will remove what is known as awkwardness, or self-consciousness, and substitute what is familiarly known as ease and grace in movement, such as characterize the orator.

This brief review of the purposes of physical training is not pertinent to my subject. It has been given simply to emphasize the fact that the teacher of physical training must be a skilled, scientific person. The nature of this subject is such that, if it is undertaken by other than skilled teachers, the results may be much worse than an entire neglect of this department.

The state I represent employs something over five thousand teachers. Of these teachers about 900 are new annually. This supply comes from three sources—the colleges, the normal and training schools, and the district and high schools through what are known as county examinations. Of the 900, about 250 come from the first two sources, and the remaining 650 from the latter source.

Those entering through the county examinations are examined in geography, grammar, arithmetic, reading, writing, spelling, and theory and practice, and these subjects furnish for them about all of the test they are capable of bearing at the beginning. In most instances their general knowledge of teaching, and, in fact, their general knowledge on all points, is such as results from neighborhood contact. This neighborhood contact involves custom, tradition, prejudice, superstition, and all other elements that are common to neighborhoods everywhere.

What would be the result of requiring this class of persons to teach physical training? It may be said that, if they were required to teach it, a supervisor might give them the proper instruction. Were this to be undertaken, the requirement would be that this supervisor give them a proper education. The writer is strongly of the opinion that any requirement of this class of teachers in the line of physical training would be dangerous.

There is no college in our state but has a gymnasium and a professor of gymnastics. The rule is that this professor of gymnastics is well informed in physical training. It does not always follow that his instruction is such as will be of practical value to the youth of the land. It is sometimes the case that he is much more concerned to get a good boat crew or baseball or football team than to accomplish the results defined above as pertaining to this department. Generally, however, I think the instruction includes all the essentials of physical training. Hence the students coming from the colleges as teachers are capable, if they have taken this department.

In our normal school we are fully equipped in this direction. Each student is required to take practice in the training for his own personal benefit, also to learn the necessary lessons in physiology, anatomy, etc., and the orders of work proper for the class-room. It is the aim of the instructors to make the work pleasant, that the students may be drawn to it rather than repelled from it, and also to carry it to such an extent that the student comes to a sense of power which, as every good teacher knows, is the strongest possible incentive to the continuation of work in this or any other branch.

Teachers thus trained go forth as missionaries of physical training. They see its value and study so to present it as to win to it those who are predisposed against it, and to make more zealous those who already favor

it. It seems to me this plan is much wiser than it would be to trust so delicate a subject to the hands of those not qualified for the trust.

In addition to the requirements of the graduates of our normal and most of our training schools, a knowledge of physical training is required of those who would take our higher, or, rather, our state, certificates to teach. We have what are known as county certificates and what are known as state certificates. Physical training is one of the subjects required for the state certificate. While the number outside of the normal school who take these certificates is small relatively, still it is a good supplementary influence.

In closing, I would recommend that a knowledge of physical training be required of every teacher who is of high grade, such as graduates of normal schools, training schools, colleges, and those who take the higher certificates; but would not require that any local, academic school have it taught as a part of its curriculum.

DISCUSSION.

MRS. FRANCES W. LEITER, Mansfield, O. — Any faithful student of the situation cannot fail to see that the future success of this nation must be built upon healthier, more reliable physical conditions than prevail today. This concerns every boy and girl who is to be a future citizen in this republic, whether reared and educated in the freedom of rural life or under the restraints of city environment. The time has passed for believing that only the city-bred child suffers imperfect physical conditions. Under the strain of modern civilization the well-being of the body can no longer be left to the incidental activities of life. The body must be developed and educated with the same efficient direction and directness which are bestowed on the mind, if the best of which the child is capable results.

That education is seriously deficient in this line can no longer be doubted. The problem which faces us is this: "How can scientific, systematic, progressive physical education be secured in our public schools, in the most efficient manner possible?"

Some difficulties are encountered:

1. General educators plead an already overcrowded curriculum.
2. Physical educators claim it is too early to bring this requirement suddenly upon the school system of the country, because the supply of competent specialists is not equal to such a demand.
3. People are beginning to recognize physical defects in rising generations; but they are not yet awake to the necessity for systematic training to overcome these defects, and prevent the same in future generations.
4. The conflict between the several systems of physical education has been, and is today, a serious detriment.

Regarding these difficulties we reply:

1. While the introduction of daily physical training may displace some mental privileges now existing, the importance of this discipline, as a balance wheel, not only justifies necessary modification of the curriculum, but promises greater efficiency in all mental work.

2. The supply of instructors can speedily be made equal to the demand, when such demand is established. Many, experienced in pedagogy, will be found ready to enter training for the new field which is now recognized as desirable by the multitudes yearly entering the profession of teaching from our universities and colleges, as well as normal schools.

3. Agitation under organized management is doing much to open the eyes of the people. Physical education is a recognized factor in one of the great reforms of the day; and, as such, calls to its service the influence and labor of one of the largest organizations of women in existence. Other societies are also becoming interested. It is believed that a higher physical plane for the people will mean less slavery to narcotics as remedies.

When the people are intelligently aroused, a few years will suffice to place laws upon the statute books making this feature of education compulsory in all schools under public control, thus putting it beyond the contingencies of spring elections and changing tendencies of school boards.

Of the more than fifteen million children attending our public schools it is estimated that less than three million are receiving physical training—a large proportion of these in no efficient manner.

Theory and practice are gradually becoming a part of the required work in all normal institutions. Normal schools, from all sources, graduate about ten thousand teachers annually. It is not difficult to see, at even this rate, a generation or two must pass from public instruction before the entire half million of teachers employed in public schools become fitted for physical training as a part of their profession.

In cities and towns where directors will be employed the regular teacher must largely have the work in charge, until a gymnasium is connected with each school building. So, plan as we may, for a long time to come the success of body training will hinge upon the ability of the one presiding in the schoolroom to conduct this work.

The state has never deferred education in rural districts until a sufficient number of graduates from normal schools have been ready and willing to accept these positions. In the present need, the yearly institutes can furnish opportunities to the county teachers. Ten half-hour, consecutive lessons, under a competent specialist, will permit the teachers in any county to carry sufficient back to the schoolroom to turn the tide in favor of better physical conditions. It is possible to compass these ten half-hour lessons within the limit of five days, if more time cannot, at once, be provided through institutes.

The introduction of scientific physical training in all normal schools will necessarily result when this phase of education is established by law; but this normal work must be re-enforced by some plan which will educate teachers already employed in the schools, if this long-neglected feature of discipline receive its proper place in the school curriculum, without serious delay.

SYMPOSIUM ON PHYSICAL TRAINING IN THE PUBLIC SCHOOLS.

MISS N. D. KIMBERLIN, SUPERVISOR, DETROIT, MICH.

It is my intention to present, in this brief paper, an outline of those factors which constitute the basis of a physical education in the public schools of Detroit.

The detail course, as prepared by the supervisor, contains general directions as to sitting and standing postures, correct passing in and out of buildings, ventilation, and a few introductory exercises to prepare pupils for the general course.

The course of work consists of a series of exercises for the first and second grades alike, third and fourth, and so on, covering a period of forty weeks' work, divided into twenty lessons, each lesson being a set of exercises upon which there is a daily drill for two weeks.

That the work shall be progressive in the course, but few gymnastics are given to the first and second grades, the plan being that those given should be supplemented by the teachers and the supervisor with games and plays.

The third and fourth grades represent the pioneer work of gymnastics in the schools.

The most difficult work of the teacher in these grades is to secure uniform attention. If only a boy's mind can be focused upon the idea of gymnastics during the short period of exercises, taken away from outward things and directed to good, vigorous movements and erect positions, then we are eradicating evils that otherwise face us again in the fifth and sixth grades, in an aggravated form.

My experience with pupils of the fifth and sixth grades has shown a decided contrast to those of the third and fourth grades. Here the children are approaching the age of adolescence, and, instead of vigor and spontaneity predominating, I find frailty and lassitude. It is in the third and fourth grades, therefore, that I especially urge thorough gymnastic exercises.

The exercises given in the manual prepared for the fifth and sixth grades are still more complex than those for the third and fourth, including many body exercises, combined arm and foot movements, with still greater attention to the military precision which should accompany the drills.

The work of the seventh and eighth grades consists of movements similar to those of the fifth and sixth, with more attention to the physiology of exercise or the effects of these drills on the body.

In the Detroit schools the work in this department is directed through the individual teacher. Teachers highly proficient in the drills are able to direct the work with only occasional supervision, and, as the work progresses, I find that principals become particularly interested in directing the work through suggestion from the supervisor.

Beside these means of direction, frequent meetings are held, at which I explain the work of physiology for these special grades and develop the exercises that are to be taught the ensuing month. Complete directions are also given for using the physiological charts with which the schools are supplied, although some teachers use the living tissue to illustrate the work.

All the work in this department has been judged by the same standard used in other branches of school work. Credit has been given for work well done, and a record kept of the same throughout the year.

Teachers under my supervision have aided in furthering the work by introducing topics bearing upon this subject into the language lessons, such as "The History of Physical Education," "The Olympian Games," "Value of Outdoor Sports," "Effect of Exercise upon the Body;" and, beside these, topics from the work in physiology, as: "Circulation," "Respiration," "The Teeth," "The Skin and Its Uses," "Bathing," etc.

Working under this plan, I introduced instruction in physiology in connection with the gymnastics in all the primary grades, and this has been accompanied with such gratifying results that I have recommended text-books on this subject to be used in other grades than the seventh, as has heretofore been the plan in our schools.

One great aim of this work is to make it educational, and of such a character as to correlate with the other subjects taught, and there is no theme more in harmony with this thought of physical exercise than that of physiology and hygiene. The exercise of the body and the care of the body are really factors of the same subject.

I wish to call special attention to another additional and very important feature of

this department, and that is the care given to the children in the schools of Detroit who are suffering from physical defects or abnormal growth. It is right here that this department supplies a want long felt by the teacher, *viz.*, the proper treatment and proper place in the school for the child afflicted with mental or physical defects which unfit him to rank or keep pace with his more active and healthful classmates.

My teachers are required each term carefully to note all apparent defects in children under their care. I record these facts and direct the teachers as to the special exercises defective children may take with ease and benefit, always keeping the work within the capacity of such children. When the pupils require special treatment by physicians, as in the case of defective vision, defective hearing, nervousness, Saint Vitus' dance, etc., the principals and teachers consult with the parents or guardians, and assist them when necessary to secure proper treatment for the unfortunate children. The hospitals of Detroit have aided in this work, and several physicians have given their services free of charge.

I found that 80 per cent. of the children in our public schools of Detroit were afflicted with some physical defect. The following are some of the defects noted during the school year of 1896: Defective vision, including cross-eyes and cataract or growth upon the eye; defective hearing, defective speech, curvature of spine, crippled hands, feet or legs; impaired nervous system, St. Vitus' dance, paralysis, and other ailments, as rheumatism and heart or lung trouble.

We have constantly endeavored to give more attention to games and plays for the primary grades, and have given great encouragement to outdoor games and sports. The children in our city schools show too little spontaneity, and many of our Detroit principals are making a study of games to be introduced into the playgrounds.

I now arrive at a point where the benefits of physical training are carried beyond the child and applied directly to the teacher. I found in my experience that there were many teachers whose education along this line had been sadly neglected, and to such a degree that, in order to be able to teach physical training, they were forced to take private lessons themselves. It was this discovery that led me to introduce into the plan of the work a department exclusively for the young women of the Detroit Normal Training School. There has been no branch of the work that has brought better satisfaction or more gratifying results.

The class was required to wear the regulation suit, consisting of blouse and bloomers, and lessons have been given at regular periods. Teachers who left the training school in February, 1896, after one year of these exercises, have shown more proficiency in drilling children than any previous class. These exercises, also, have the recommendation of being of vast benefit to the teacher in the care of her own health, thus relieving the continuous strain of school work. She becomes a practical example of her own theories.

MISS REBECCA STONEROD, WASHINGTON, D. C.

Any method of body training which may be adopted today is a method merely for the present. It is but one step in the great trend of progress. If we have grown, we are not doing today, in the same way, that which we did eight years ago. If we are growing, we shall not be doing eight years hence, in the same way, that which we are doing today. All educational methods are tentative. The same is true of any method of body training. It is death to progression to take as final any present system of exercises. In no line of investigation has there been greater progress than in the departments of physiology and psychology. It is upon these two subjects that our whole theory of education is based. We must be broad enough to accept the teachings of students and investigators as the best according to our present knowledge, and base our methods and our work upon such.

What are we doing physically for the little ones who have come to us from the home

or the kindergarten? Are we forcing them to sit still and keep still by the hour? Are we making them stand like little ramrods, while going through meaningless gymnastics? Or are we singing little motion songs, delightful and good as far as they go, and calling that physical training?

Let the gymnastics of the primary school be as rational, as systematic, as developing, as those of the higher grades, but let us make them as playful as lies within our power. It is possible to have the exercises as free, as happy, as natural as are all the movements of childhood, and at the same time to follow the principles of rational gymnastics.

All parts of the body should be exercised, particularly the trunk and legs, which are likely to be neglected in ordinary school work. Kindergarten, and even primary schools, have been greatly criticised in regard to this one point of having so much of their work and exercise of the fine muscles of the hand and eye, the nerve centers of which should be developed later in life, while the large muscles of the trunk and legs, which should receive greater attention at this early period, are neglected. In gymnastics, then, properly applied, we have something which will in a measure counteract this evil.

It is sometimes possible to make the physical exercises complementary to the other work of the schoolroom. For example, if we are studying birds, a gymnastic lesson may be devised in which the bird idea is carried throughout the lesson, the children playing that they are young birds in a nest learning to fly. Let them bend their heads backward and look up at the clouds to see if the weather is fair, before venturing forth, then bend their bodies from right to left, looking over the edge of the nest to find out how far it is to the ground. After leaving the nest, they may hop for a moment on the branch of the tree, then finally spread their wings and fly by, running with waving arms. Returning to the nest tired and warm, let them take many deep breaths, lifting up their arms as wings.

Here we have the elements of a perfect gymnastic lesson; something within the actual experience of the child, therefore comprehended by him, a vivid appeal to his imagination, a bringing into action of every part of his body; and, most important of all, the child is free as air and happy as a bird.

This becomes regulated play, play directed toward educational ends. It is the kindergarten idea carried into the primary school. To take advantage of the self-activity of childhood and adapt it to our own ends, thereby making it a means of education, is to secure economy of force. If we are wise, we shall direct the activities of the child into those channels which lead to its physical, moral, and mental well-being.

Something done for a few minutes and then dropped for the rest of the day avails little. In its broadest sense physical exercise can be carried into all the activities of the schoolroom. How delightful, while visiting a primary school, to see a class at the black-board using large, free-arm movements as they write; or later, clustered around their teacher for a reading lesson, moving about without restraint, and running quietly and happily to their seats when the lesson is over! The stern, dogmatic method teacher of constrained little men and women is fast being left behind. In these days let us preach the gospel of freedom and happiness.

MISS JESSIE H. BANCROFT, BROOKLYN, N. Y.

In the Brooklyn public schools we have had systematic physical training for four years. We combat the adverse physical conditions of school life with free-hand gymnastics, taken in the schoolroom; with active games played at the recess periods; and by examination of the sight and hearing of the children, that they may be seated with reference to those powers and for the detection of cases needing special treatment. We have also measured the children in some of the old schools where the misfit of furniture is especially pernicious, hoping to convince the board of education and the board of esti-

mate of the need of more adjustable furniture; but the logic of anthropology and the logic of finances seem very seldom to agree. In our new buildings, however, 25 per cent. of the furniture is adjustable.

As to the administration of the physical training department, the work has heretofore been carried on by one person—the director.

Next year we shall have seven assistants—four for the elementary schools, two for the girls' high school, and one for the training school for teachers.

The daily lessons are conducted by the class teachers, the director laying out the work for them, inspecting classes, giving normal instruction to teachers, and helping them in every way to maintain and improve the standard.

As there are 2,500 teachers in the city, teaching 127,000 children, it has been impossible to have grade meetings for direct instruction to the teachers from the director.

We have, therefore, used the London method of having one, two, or three representatives appointed from each school, according to its size, to meet at stated intervals for directions for the work to be done. They transmit these to the teachers in their respective schools or departments, see that instructions are there carried out, and act as referees. These supervisors or referees are nearly always the assistant principals or heads of departments, but occasionally a principal or a class teacher acts as a substitute. The work thus reaches the children at third hand, but the results have been so satisfactory that the method has been adopted in the New York city schools. Heretofore it has taken two years to make a circuit of the schools for the inspection of classes, but hereafter, with the assistants mentioned, each class will be visited at least once a term by a specialist.

Our gymnastics are free hand, taken in the aisles of the schoolrooms for fifteen minutes daily. We do not consider that work so limited in every way can even approximate a complete physical education, any more than a complete education can be acquired in any other branch under the public-school conditions. We would like free floor space, apparatus, special costumes, more time, and more teachers; but, like the vast majority of schools in this country, we have to bow to the financial and other limitations. But even so we can successfully counteract, in a majority of cases, the deleterious conditions of school life. We have commenced, in a very small way, the introduction of light apparatus into the few buildings where the corridors, basement, and assembly rooms afford the needed space. We hope in time to make the use of apparatus more general, but not in every grade. In our opinion, the correction of posture, which is so essential a feature of school work, is much better accomplished by free-hand work, and we would have the free-hand and apparatus work interchanged in alternate grades. We are audacious enough to hope for gymnasiums in the new buildings of the future.

The course of work is laid out for the class teacher. She works from a printed manual. To expect her to make her own arrangement of the exercises is to expect her to work either without principle or to study those principles and to become a specialist. It seems to us no more reasonable to expect a class teacher to do this than to expect her to write her text-books on other subjects. The simpler the work can be made for her, the better. She has her hands full at the best.

Of the many possible objects to be sought in gymnastic training, we select three and try to pursue them equally. First, we combat the sedentary conditions by seeking to get a maximum of stimulation for the nutritive processes of the body—circulation, respiration, etc.; second, we strive to correct the posture of the chest, shoulders, back, head, etc.; third, we aim for the physiological training that comes through commands—the training of the volitional and inhibitive powers of the will; of motor response, in which the quick, connected working of sense-perception, appreciation, muscular co-ordination, and other elements place one in close correspondence with the environment; in short, to cultivate a definitely controlled and quickly responsive body.

The work itself is eclectic. We take principles of progression—mechanical and physiological—from the Swedish system, but not their classification of exercise method of command and repetition from the German system; the form of the exercises themselves from any and every system, so long as the positions, work, and posture that they call for come within the principles mentioned.

HENRY SUDER, SUPERINTENDENT OF PHYSICAL CULTURE, CHICAGO, ILL.

Before beginning to speak about the subject given me by your committee, it will be necessary to inform you how physical training was introduced and taught in former years.

Introduced as an experiment in four of our schools under the supervision of one special teacher in November, 1885, it was adopted for the whole grammar department at the end of the school year 1886, and eight more teachers for this work were appointed. In January, 1889, upon the request of principals and teachers, physical training was introduced into the primary department, and in May, 1889, into the high schools. The grammar grades were visited by the instructor of physical culture twice a week, each primary grade twice a month, the high schools once a week. In grammar and primary schools the duration of the lessons was ten minutes; in the high schools the time varied from thirty minutes to one school hour.

A remarkable change in regard to physical training took place in June, 1893. The board of education found it necessary to reduce the number of special teachers, and four instructors for our high schools and eight for grammar and primary schools (one for each district) were appointed.

In October, 1893, a teachers' training school was opened. Among other studies, physical culture was introduced into this school. Nearly all the cadets had practiced the exercises in primary, grammar, and high schools; they knew how to execute the exercises, and, therefore, special attention was given to teach them how to conduct the exercises prepared for the different grades.

The manuals of physical culture used in our schools were prepared for the special teacher more than for the class teacher, as the former visited the schools often enough to do the principal work. Since the reduction of the number of special teachers, the class teacher was obliged to give the daily lesson. I found it necessary to make the explanation of the movements more explicit. The manuals for the different grades were rewritten with the above need in view and in accordance with the time set aside for physical training. The middle of the morning session is generally taken for physical work, but in many schools exercises are practiced also in the afternoon. In the lower grades of some schools teachers combine mental and physical work at any time during the school session.

The exercises are very often accompanied with instrumental, sometimes also with vocal, music. The manuals for the different grades contain forty lessons, that is, one lesson for one school week. Besides those lessons there are exercises indicated, which may be accompanied with vocal music. The wand is used as hand apparatus in the fourth, fifth, and sixth grades; in the seventh and eighth grades dumb-bells and Indian clubs also are used. Each lesson contains, with a few exceptions, arm, trunk, head, and leg movements. It begins with preparatory and ends with closing exercises. The preparatory are the so-called exercises by command. The general exercises are movements executed by counting. The closing exercises are either breathing or desk exercises, and are practiced slowly. The exercises for the different grades are arranged as follows:

First and second grades—simple exercises in two counts.

Third and fourth grades—simple exercises in two and four counts.

Fifth and sixth grades—compound exercises in two and simple exercises in four counts.

Seventh and eighth grades — simple and compound exercises in four counts.

There are different methods of teaching the exercises — to exercise by command, by counting, by command and counting combined, and in successive order. Exercises conducted by command are movements which are only practiced when the command is given. The pupil remains in a given position until the teacher indicates another movement. Example: "Raise arms forward — raise! Move sideways — move! Raise upward — raise! Place hands on shoulders — place! Bend trunk forward — bend!" etc.

If two or more exercises, simple or compound, are to be executed in succession after the same command of execution, the command that is given with the first position is generally used as command of execution. For example: "Place hands on hips and straighten arms forward — place!" At the command "place!" the hands are placed on hips and immediately straightened forward. Or: "Raise left leg forward and bend right knee — raise!" At the command "raise!" raise leg forward and at the same time bend the right knee.

To exercise by counting: After stating the first exercise, the teacher gives the command "Begin!" then counts one-two or one-two-three-four, and the pupils begin to exercise and continue until the command "Halt!" is given. Then the next exercise is explained and practiced.

Exercises by command and counting combined.—While the pupils practice an exercise by counting, the teacher dictates a new movement, and with the command "One — begin!" the new exercise is taken up.

Exercises in successive order.—The teacher gives a number of exercises, which are to be practiced in successive order, and also the number of counts for each movement (generally eight or six counts). The pupils then count for themselves and exercise in the order named. This method is generally used in exercising with music. Another method generally used at the end of a lesson as desk or closing exercises is the following: The instructor, facing the class, performs some exercises, and the pupils, following his movements, practice the same simultaneously without further command. To vary the command, the teacher may conduct a given exercise slowly in the beginning, increase its rapidity, and at the end count or beat slowly again.

As a variation, the formation of a class may be changed; for instance: divide the class into two divisions; one division will execute one-fourth turn to the left, the other, one-fourth turn to the right; the two divisions face each other, then the exercises begin. Or: The class is divided into three divisions; the two outer divisions face each other, the center division faces forward. As a rule, the teacher follows the exercises indicated in a lesson, but it is left to her to select such exercises as best answer our purpose in developing the whole body. The instructor, visiting a school, requests the class teacher to conduct some of the exercises of previous lessons. If these are improperly conducted, the mistakes are quietly pointed out to the class teacher by the instructor, under whose command the exercises in question are thereupon repeated; he then selects some exercises of the succeeding lessons, gives the necessary explanations, and conducts the exercises himself.

Marks are given to the class for its work; the instructor, in giving the marks, takes into consideration the command of the teacher and the execution of the exercises by the pupils.

MISS ELLEN LE GARDE, PROVIDENCE, R. I.

Dr. Sargent, of Harvard University, has characterized our plan in Providence as a differentiation of movements. By this he means that we have no cut-and-dried system, no plan which cannot be added to or subtracted from, as we find it fits or does not fit the pupils. We have an end, an aim, the uplifting and upbuilding of the body as a whole, its physical, its mental, and its spiritual side.

If you were to ask me what system I teach, I would answer frankly: I do not know, unless it be German modified by Le Garde.

We have in our schools three teachers in the grammar and primary grades, and three special directors in the different high schools. In all the grades free work is given from September until February, the main object being to gain an advance in strength and self-control. In February the grammar grades are put into apparatus work; easy wand exercises in the sixth grade, more difficult ones in the seventh, dumb-bells in the eighth, and short bar-bells in the ninth. In the primary grades the work changes in character from that of command to that of work from memory with rhythm and time, and exercises aiming toward grace. The games also begin at this period and last until warm weather. Each teacher gives her lessons twice a day, fifteen minutes being the time allotted, except in the lowest primary, where twenty minutes is taken in four periods. But, while this is the general outline, it is not carried out after the laws of the Medes and Persians. With 25,000 children of all sorts of nationalities, and all sorts of differing physiques, there may and does arise a modification, and what might be beneficial to the bodily growth of a school in one section would not fit the under-fed, under-bred bodies in another. Hence a plan which differentiates the exercises and fits the medicine to the disease. In other words, my assistants and I aim to study first the physical needs, and give such exercise as will bring up to the average status and condition the pupils we oversee.

Each teacher in the Providence public schools has been shown and directed how to detect physical defects of sight and hearing. These children we send to the free dispensaries or notify parents, who, alas, are often so neglectful of their own. Every child in the city is looked over each fall for common physical defects. Spinal curvature is our main object, and, when a case is noted, the parents are asked to meet us to see if they will take suggestions for remedial steps. Arrangements have been made with two trained specialists for treating the children we send from the schools.

As I believe in removing the cause of physical defects, there has been placed in every schoolroom in Providence two or more rows of adjustable seats and desks. Where required, more than this number are used. Each child is seated according to height and vision, and teachers are taught how to do this for all newcomers. Malformed and crippled children have specially constructed chairs and desks for their use. Dr. Hartwell does not believe a physical director should be a sanitary policeman, but just as long as school boards will not employ both, then I feel I must have an oversight over the school sanitation, that the physical exercises may be carried on under right conditions. Fortunately the subcommittee of hygiene and physical training in Providence permits me to oversee ventilation, light, cleanliness of children, and their surroundings. It has just passed a resolution for a plan of medical inspection each morning of certain grades and buildings.

In our city training schools, of which we have twenty-six, and with fifty-two pupil-teachers in all, there is a distinct understanding that the young ladies in training must use their gymnastic work as a means to an end in gaining discipline and an insight into the physical needs of the children. If a pupil-teacher fails in this, she is not retained. She is shown how to use her voice, and how to use her own body. As "manner maketh man," we aim also to inculcate that courtesy which indicates the highest breeding. Along with the physical course goes a course in manners. Each child makes a courtesy or bow before and after each gymnastic lesson. Each child must show that intelligent interest which indicates a genuine liking, and the only record the work has lies in the statement that no child in the city has ever asked to be excused from his lesson except for temporary illness. I am afraid we laugh and bubble over with fun, that the children regard myself and assistants as very good play-fellows, and that you would be surprised to find how simple the work is, for there is no nervous strain, and we are enjoying every second. There is plenty of fresh air and much deep breathing. There is much

encouragement in voice and example to keep the head well up and the body steady. For I should explain that *we personally*, for the first time, give each new lesson. I believe that physical directors make their greatest mistake with both pupils and teachers when they only supervise and do not teach. Our plan in Providence, then, is first to study the children and the children's environments. If anything is found which affects their physical growth, we aim to remove this cause. We call to our aid the city physician, the plumbing inspector, and the inspector of city property. We reach the parents, and here we find that ignorance which is our greatest stumbling-block. But fortunately we have the indorsement of the city superintendent, the subcommittee on physical training, and, indeed, the community at large.

I am sure you will agree with me that the plan is peculiar. That homely saying that "the proof of the pudding is in the eating" would be exemplified if you would come to Providence and spend a day or more with us. We should enjoy it, and I can promise you that you will have to travel many miles to find happier children and happier physical teachers. The work is more practical than theoretical, but that we are gaining and growing better in health and physical integrity, I feel, must be my reasons for adhering and advocating a *practical* and *elastic* plan of physical training in public-school work.

MISS CLARA G. BAER, NEW ORLEANS, LA.

The history of physical education, as connected with the public-school work in Louisiana, may be said to have begun in 1894, when the state legislature passed the act naming physical education as one of the branches to be taught in the public schools. At the Louisiana Chautauqua, since 1893, gymnastics have formed a prominent feature in the summer courses. In 1895 the state institute conductor secured the services of a specialist, who every year visits the various summer normal schools throughout the state.

In the New Orleans public schools, in the fall of 1896, physical education was made a part of the regular curriculum. When this fact became generally understood, the New Orleans Educational Association determined, as its work for the winter, to provide an instructor for the teachers in the city schools. In this it was encouraged and materially aided by the board of directors. At first the almost insurmountable obstacle seemed to be how to dispose of the more than six hundred teachers, so that all might receive instruction about the same time. An hour, four afternoons of the week, was set apart for the work. The teachers, including all those from the first to the eighth grades, and the pupils of the normal school, were divided into eight classes, averaging seventy-five in a class. In eight lessons or two weeks the entire number had completed the first lesson of the series. That is, each class had a lesson every two weeks. Thus the introduction of the work was general; and, as all the grades were practically beginning physical education, the instructions applied to all and fitted their requirements. The course of lessons was of six months' duration, included theoretical, practical, and, toward the end of the course, pedagogical work. The practical work they put into use at once. The exercises were based on the Swedish system and arranged according to its progression. The theoretical work was limited to the most necessary points of the system under instruction, and the discussion of the most important features of gymnastics in general. The practical work was from a manual prepared by the writer and published by the board of directors for the use of the teachers in the schools. The order of the daily exercises included the free-standing movements of the Swedish system adapted to the schoolroom. While in the limited time no attempt was made to introduce gymnastic apparatus, such as dumbbells and wands, their place in progression was indicated, and their use on gymnastic principles discussed. Marching exercises and æsthetical gymnastics, in their relation to the system adopted, formed a part of the course. Voice culture was introduced, and instruction given in breathing in reference to control of breath in reading and speaking.

As the teachers grew more familiar with the system and application of the exercises, opportunity was given them in class to make use of this knowledge, with the special view to ascertaining how clearly the subject was understood in regard to three points: the nomenclature of the system, the manner of applying the commands, and the form of execution of the movements. In showing the latter, a child was used as a model, his movements were criticised and discussed before the class. This also brought out the idea of the rhythm of each movement, and the time necessary to each movement, or part of movement.

The work done in the school has as yet no special supervision. The superintendent of education and the various members of the board of directors visited the school from time to time within the year, with the view of seeing the gymnastics. In the majority of cases the result was most satisfactory. As often as practicable, the teachers give the exercises in the open air. New Orleans is particularly blessed in having large, cool basements under many of the school buildings. Here the children congregate at recess, and here, in many schools, the gymnastic exercises are given.

In the various kindergartens, of course, the children have their play games, and we feel sure that this is but the beginning. The climate of New Orleans favors recreative out-of-door exercise during the school year. Indeed, there is scarcely a month when the children are house-bound. With the proverbial love of motion and action that is a part of the temperament of the southern child, much can be expected from this branch of education. This vitality is always noticeable in early life, but, as the southern child develops rapidly, demands are soon made upon the nervous system which call for a corresponding supply of muscular energy, a strong, healthy body to generate nerve force. Particular attention should be given to the physical exercises between the ages of seven and fourteen years, with such hygienic agencies as pure, wholesome food, fresh air, sleep, etc.

Many illustrations might be presented from the experiences of the teachers that indicate what a hold the work has taken on the minds of the little ones, and how much they expect from it. Some of the anecdotes related are very funny, some deeply pathetic and all encouraging. The children are interested. The people are awake to the needs of the time, fully realizing how important a part of education is the systematic development of the body.

MR. GEO. WITTICH, ST. LOUIS, MO.

The term physical training sounds almost like mockery when one looks at our exercising places, the narrow aisles and crowded rooms; but, in defiance of all, our good results must be striking and apparent, for several of my colleagues from the East commended the general carriage, the robust appearance, and the discipline of our school children during the meeting of the N. A. G. W. last May.

These good results, if such are really perceptible, are due, first, to our able district instructors, who thoroughly understand their branch and possess the necessary cheerfulness and the necessary ingenuity always to make those simple schoolroom exercises interesting; and, secondly, to the good will and work and pleasant co-operation of the class teachers, principals, and superintendents.

The following refers only to the eighty-two district schools and not to the high school:

Method of Instruction.—For physical training our schools are at present divided into seven equally large districts, with an instructor for each one.

The instructors must visit their schools once in two weeks and give a new lesson each time, according to a fixed plan, and the class teachers must repeat the same daily; the time allowed for the daily work is ten to fifteen minutes. At the end of each quar-

ter the most essential exercises are repeated in form of an examination, the class teachers conducting them.

The command of the teacher and the way she handles her class, as well as the work of the children, are marked, judged, and the result given to the principal of the school.

The whole is controlled by a supervisor, who must visit all the schools and report the condition of things to the superintendent at the end of each quarter.

Exercising Material.—The exercises are arranged by the supervisor, bound into pamphlet form, and are in possession of every class teacher. They are taken from the two parts of the German gymnastic system called marching and free exercises, with and without the wand. They are mostly executed in the aisles of the rooms, few schools being so fortunate as to have corridors or basements large enough for the work. Some schools use the yards, when the weather permits.

The material is graded in the following manner: Grades 1 and 2 have simple free exercises of two movements of all parts of the body; exercises of the trunk and legs, with arm positions and compound companion exercises. Grades 3 and 4 have simple free exercises of four movements and compound free exercises of two movements of all parts of the body. Grades 5 and 6 have compound free exercises of four movements and simple and compound wand exercises of two movements with overgrip. Grades 7 and 8 have compound wand exercises with overgrip and undergrip of four movements.

The marching exercises in all grades are limited to forward, sidewise, and backward marching, mostly a given number of steps on account of the insufficiency of room; in the higher grades facing and arm exercises in walking are added.

A daily lesson consists of: (1) preparatory exercises; (2) neck exercises; (3) arm, leg, and trunk exercises, simple and compound; (4) marching exercises (correct standing and walking); (5) breathing exercises.

In the selection and arrangement of the exercises less importance is placed on nonessential and unnecessary movements, such as graceful positions, than on animating, invigorating, and inspiring exercises that will cause a deeper respiration and a more rapid circulation, for we consider it a sin to waste one moment of that short time set apart for this branch in our course of study.

The aim of the work is, firstly, to counteract the bad influences of long-continued sitting, and to ease and relieve the mind for a short while; secondly, to give the child the correct carriage of the body; and last, but not least, to promote discipline.

I believe that we are approaching these points slowly, but steadily, in defiance of all obstacles.

The drill of the school children during the meeting of the N. A. G. W., the grandest exhibition of its kind ever attempted and witnessed on earth, the enthusiasm, the work, and discipline of those 9,000 children, who came on that rainy Saturday from one-half to seven miles, I hope have given evidence enough and will suffice as proof.

Hygiene is given some attention and is taught by the class teachers with a so-called health primer as text-book. In the coming year we will introduce popular lectures on this subject, such that a child can understand; they will be held in the class-rooms at the end of each quarter.

Games are simply out of question; for the present most of the yards are so small that the children have just room enough to walk about comfortably during recess; running about during recess is forbidden in most schools.

A number of schools are even compelled to have so-called sectional recess.

In this line I would like to have advice and suggestions.

With the actual work we are satisfied. We have succeeded in interesting most of the children and teachers, and the effects are perceptible.

What place physical education should hold in the general education of our youth

we all know. We know that it is almost ridiculous to give a child ten minutes' free exercises daily between desks, when its mental faculties are at work five hours, not counting the time spent at home studying. We also know that small school yards and dusty or muddy streets or alleys are no playgrounds for our children, and that every school should have a spacious yard for exercises during pleasant weather, and a room without desks for unpleasant weather, both fitted out with the necessary apparatus. We know that the twenty minutes' daily recess time together with the ten minutes' daily exercising time used up in the yard or room, under careful and competent instructors, would come near to the right point.

But we are seldom asked to give an opinion on this very important question by those who are in authority in this matter, and, therefore, the art is to make the best of what one has, and I believe that we are doing it.

PHYSICAL TRAINING IN THE COLLEGES.

BY FRED E. LEONARD, M.D., OBERLIN COLLEGE.

It is a conspicuous fact that within the last two decades of the present century our foremost colleges and universities, with few exceptions, have been providing for the physical training of their students by the erection of gymnasias, which, in many instances, rival the other buildings on the campus in size and cost, and by assigning the direction of the work done in them to some officer supposed to possess special qualifications for his position. In such recently founded institutions as Leland Stanford and Chicago Universities the chair of physical training has been among the first to be filled, and the gymnasium has followed close upon the library.

The wisdom of this new departure in college education is apparent. Many a student is physically defective when he enters upon the course of study. The general muscular development of thirteen out of the last one hundred men examined at Oberlin was noticeably poor; eighteen were flat-chested, more than a third stood with head and shoulders drooping forward and abdomen protruding, an equal number were flat-footed, and nearly as many carried one shoulder considerably lower than the other. Deficient mobility of the chest walls, irregularities in the heart's action after exertion, nutritive disorders, abnormal susceptibility to colds, evidences of exaggerated nervous irritability and of faulty muscular control, are frequently observed.

The conditions of college life, too, favor physical carelessness. The current sets strongly in the direction of mental effort. The scholar's ambition is aroused, his circle of interests widens, he realizes the need and the possibilities of intellectual attainment. Under the urging of teachers the successful student is likely to apply himself too continuously

to his books ; the poor student, or the one who is unused to study, may be compelled to exert himself to the utmost in order to keep up with his mates. Social distractions make their demands upon spare moments, and outside interests multiply as the end of the course approaches. The claims of the body for a reasonable share of care and training are easily overlooked, unless there is some organized attempt to enforce them.

It is during these very years of student life, moreover, that the growth period of the body comes to an end. This growing period is the impressionable one. The bones are being consolidated, the chest is taking on its final shape, respiratory and circulatory power can still be increased, the nervous system is wonderfully responsive to training, and the possibilities of attainment in muscular control are at their highest. Never again can correct habits of carriage and action be so easily established, and the human machine be brought so completely under the control of the will and made its ready servant.

Student athletics, although they form an important part of the necessary physical training, are not sufficient. So far as they go they are invaluable, drawing the student out of doors and away from the routine of school life, and affording exercise made vigorous by the stimulus of competition. They help to counteract influences that tend to over-refinement and effeminacy. They demand and develop presence of mind, alertness, physical courage, self-control. But even the size of the playgrounds which they require makes it impossible that they should reach all of the students in any but a small institution. They attract the most proficient, not the most needy. They have their place in the fall and spring, but must be given up entirely, or only occasionally practiced, during the four or five months of the year when the temptation to physical inactivity is greatest. They leave untouched some of the commonest physical defects. They are largely lacking in careful supervision, system, gradation, adaptation to individual needs. They can be compared to the student's general reading, rather than to his serious study. In a word, though they yield the recreative and hygienic results of physical training, they are lacking in the corrective ; they are educational, but only in a haphazard sort of way.

Amherst College, in 1860, was the first in America to establish upon a sound basis a department of physical training, placing at the head of it a thoroughly educated physician, a member of the college faculty, with the title of professor of hygiene and physical education. Dr. Hooker, the first incumbent of the chair, was succeeded a year later by Dr. Edward Hitchcock, whose period of service has been an unbroken one from that day to this. Nearly a score of years passed before Harvard College (1879) became second on the list, by appointing Dr. D. A. Sargent assistant professor of physical training and director of the Hemenway Gymnasium,

which had been erected at a cost of more than \$100,000. Within more recent years the same thoroughgoing provision has been made by Bowdoin, Cornell, Oberlin, the Universities of Pennsylvania, Michigan, and Wisconsin, Leland Stanford University, and a number of smaller institutions. Yale has two associate directors of the gymnasium, who are physicians, but they are not given entire charge of the department. At Brown and The University of Chicago the department is well organized, but is not under medical direction. Few of the other colleges of recognized standing are without a director of the gymnasium, but too often they have been content with the erection of a showy building, instead of looking to the organization of an efficient department; it has not been put upon an equal footing with other departments of instruction and expected to do the same quality of work; the same grade of general culture and special preparation has not been exacted from its head.

Of the colleges for women, Smith, Vassar, Wellesley, Bryn Mawr, and Mt. Holyoke all have college physicians, in most cases giving instruction in physiology or hygiene, or both. Each has in addition a director of the gymnasium, but only at Bryn Mawr is she a medical graduate. None of these directors is given the rank of professor in the faculty, but they are better qualified for their positions than are many of the male directors. The Woman's College of Baltimore is best organized, with a professor of anatomy, physiology, hygiene, and physical training, and two instructors in physical training.

The completion of the Hemenway Gymnasium at Cambridge, Mass., in 1879, marked the beginning of the present era of gymnasium building in American colleges and universities. The example of Harvard was followed during the next decade by Amherst, Cornell, Johns Hopkins, Bowdoin, Williams, Lehigh, Bryn Mawr, Vassar, and some others; and among the large number added to the list since 1890 are Yale, Wesleyan, Brown, Rutgers, Colgate, the Universities of Michigan, Wisconsin, and Chicago, Leland Stanford, Smith College, and the Woman's College of Baltimore. The cost of the better class of these buildings ranges from \$10,000 to \$250,000, the average being not far from \$50,000.

A typical gymnasium of the period may be described somewhat as follows: It is built of brick or stone, several stories high, with a basement. The large main hall, containing the bulk of the apparatus, is open to the roof, unobstructed by posts or pillars, surrounded by a suspended gallery for the running track, and crossed above by iron beams to which the swinging apparatus is attached. On the floor below, or in the basement, are lockers in which the clothing worn during exercise is stored between times. Here, too, is a very important feature, the bathing equipment, consisting commonly of a plunge bath, tubs, and a considerable number of shower and spray baths. There are also the director's office and

examining rooms, rooms for special developing appliances, or for boxing, wrestling, and fencing, perhaps bowling alleys in the basement, a "cage" for indoor baseball or tennis, an athletic trophy room, and others for the heating and lighting plants, fuel, etc. The whole building is heated by hot water or steam. The apparatus in the main hall is partly portable, including wooden and iron dumb-bells, Indian clubs, and wands; there are pulley weights, arranged to exercise all the principal groups of muscles, and adjustable to suit all grades of strength; the fixed or "heavy" apparatus comprises such forms as the horizontal bar, parallel bars, ladders, ropes, poles, swinging rings, the horse and buck for vaulting; provision is also made for a variety of simple throwing and running games.

Before the student enters the gymnasium he is generally called upon to submit to a physical examination. In some schools this is required of every student, whether he goes to the gymnasium or not; in others it is optional for all, or confined to those in actual attendance. Its extent and thoroughness vary with the training and character of the examiner, and the time at his disposal; but there is a general uniformity of method throughout the country. The most complete form includes: (1) A record of certain facts of family and personal history, which may explain abnormal conditions, if these are present, and direct attention to probable tendencies. Among such facts are the nationality and longevity of grandparents and parents, the environment and health of parents, the father's occupation, diseases common in the family, or thought to be hereditary, personal injuries and diseases, habits regarding physical and mental work and recreation, sleep, life in the open air, the use of stimulants and narcotics. (2) A systematic inspection of the whole body, recording such points as the apparent temperament, general muscular development and condition, position of head and shoulders, deviations from the normal curvature of the spinal column, shape and mobility of the chest, the proportionate development of various groups of muscles, abnormalities of whatever sort. (3) A medical examination of the heart and lungs. (4) A series of about fifty measurements of weight, height, various lengths, breadths, and depths, the girths of trunk and limbs at different levels, followed by tests of lung capacity, and of the strength of large muscular masses, for example those of the chest, back, front of thighs, upper arms, and forearms.

In many instances, and especially where the director is without medical training, the examination is much less complete, and covers little more than a few facts of history and a series of measurements and tests. These may be of value as a means of interesting the student in his own development and furnishing data for future comparison, but by themselves they are almost worthless as an index of physical health and proficiency, or as a ground for special instructions. They need to be supplemented

and explained by inspection, and by other means of examination and diagnosis. But if the work has been intelligently and thoroughly done, the director has at hand a valuable fund of information to be used in framing advice suited to the needs of the individual, and the study of hundreds of such cases together may yield important deductions concerning the characteristics of the student class. In this way a variety of graphic charts have been prepared, upon which the measurements and tests of the individual can be plotted so as to show at a glance his relation to an imaginary standard. It is true, however, that much of the chart-making hitherto done has been of trifling scientific value, based upon insufficient data, or the result of superficial methods. This study of men in masses should not lead to the neglect of the individual, who, after all, must be compared with *himself*, with his own latent possibilities.

There is so much diversity in the methods of physical training employed in colleges and universities at present that a satisfactory summary is difficult to give. As elsewhere in this paper, where names of institutions are used by way of illustration, no attempt is made to furnish complete lists. A few schools, like Bowdoin and Leland Stanford, allow credit for work done in the gymnasium, just as for any course in the laboratory or class-room. Regular attendance during the four years of undergraduate life is required at Amherst, Bowdoin, Brown, The University of Chicago, Bryn Mawr, Smith, Vassar, and the Woman's College of Baltimore. The requirement extends only through the junior year at Mt. Holyoke and the women's department at Oberlin; through the sophomore year at Wesleyan and the University of Wisconsin; and is confined to the freshman year at Cornell, Dartmouth, Williams, and Wellesley. The work is altogether optional at Harvard, Yale, Princeton, Johns Hopkins, and the Universities of Pennsylvania and Michigan.

The nature of the work done can be shown with tolerable accuracy by the selection of certain types. The results sought at Amherst are hygienic and recreative, rather than corrective or educational. The men meet by college classes, each of which elects its captain. The characteristic feature is a memorized series of exercises with wooden dumb-bells, set to music and executed by the entire class under the leadership of its captain. The men are required to be present and to take part, but beyond this there is little attempt at discipline. They have a good time, all the functions of the body are stimulated by the vigorous exercise, and the spirit of class rivalry, intensified by a system of prize exhibitions, insures a degree of proficiency. The use of the fixed apparatus is optional, and not much is made of prescription work for the individual. This plan, while it has given general satisfaction at Amherst for many years, has not been introduced into other schools to any extent. It owes much of its success to the peculiar conditions existing there, and to the personality

of the beloved director, Dr. Hitchcock. Some of the features have been adopted at Cornell, where, however, the work has to be combined with a system of military drill.

The conditions at Harvard are quite different. The number to be provided for runs up into the thousands. The system of electives abolishes class lines and forbids an arrangement of the schedule which would leave certain hours free for exercise. It, therefore, becomes next to impossible to group the men for graded instruction, and prescribed work for the individual has been adopted as offering the best solution of the problem. Dr. Sargent's series of widely known and used pulley weights, adapted to a wide range of wants and strengths, was devised to render more efficient the making and carrying-out of these prescriptions. While such a plan is admirably suited to the needs of Harvard, it has been a mistake to introduce it so extensively into the schools where the age of the pupils renders more constant supervision and direction desirable, and where instruction can be given in graded classes, with the added incentive that comes from working in company with others. The use of the so-called developing appliances secures results which are corrective, and in a measure hygienic, but they lack recreative and educational qualities.

What has been said of Harvard will apply, in the main, to Yale, though there the interest in athletics overshadows all else. At Bowdoin a system of applied athletics, or competitive gymnastics, is the distinguishing feature. The freshmen, in addition to their prescribed corrective exercises, are given a preparatory discipline in military drill and Indian club swinging. The sophomores receive class instruction in the elements of boxing and wrestling, with supplementary squad work on the fixed apparatus (horizontal bar, parallel bars, flying rings, etc.), the squads being arranged in three groups, graded according to strength and skill. The juniors learn to fence with single stick and broadsword, and the seniors with foil and mask. The results sought are clearly educational, as well as corrective and hygienic. The work at Brown, though it differs in details, can be referred to the same type, except that military drill is required in the fall and spring of the freshman and sophomore years, under an officer in the United States army.

Where the work is required only during the early part of the course, or for a term or two, it is in too many instances unworthy to be called scientific or pedagogic. It commonly consists of a combination of prescribed exercises for the individual, memorized class drills with light apparatus, and optional use of the fixed apparatus. It has, to be sure, some corrective and hygienic value while it lasts, but it is likely to grow monotonous, and is dropped before it has accomplished much in the way of genuine training. It cannot be too strongly insisted that proper grading of classes, careful selection and arrangement of teaching mate-

rial, progression in each lesson and throughout the series of lessons, and skillful adaptation of methods to meet local conditions, are of fundamental importance in physical training, as they are in other phases of educational effort.

Some surprise may be excited by the statement that at the present time the most painstaking and satisfactory work is being done in the colleges for women, but it is probably true. The college officers are, as a rule, more alive to the importance of the department; the teachers are, with few, if any, exceptions, graduates of normal schools of gymnastics requiring two years of study; the disturbing element of athletics does not enter so largely into competition with efforts at systematic physical training. At the Woman's College of Baltimore the system employed is purely Swedish, and the instruction is given by two graduates of the Royal Normal School of Gymnastics in Stockholm. The same system is employed, though less inflexibly, at Smith College. Bryn Mawr and Vassar have a combination of individual work and class instruction with light apparatus, making most of the former. The work at Mt. Holyoke is somewhat the same, but more varied. At Wellesley athletics receive a relatively larger share of attention.

It will not be out of place to refer, in conclusion, to a source of instruction and suggestion almost unknown to the great majority of the directors of American college gymnasia. We, in this country, have been greatly benefited by the study of Swedish gymnastics; but anyone who comprehends the wealth of the German literature of gymnastics, and the extent and variety of the experience of which it is the outcome, must regret the fact that it has been so generally overlooked. It offers an inexhaustible storehouse of material, which will be found especially helpful in planning work for the advanced classes in our institutions for higher education.

DEPARTMENT OF NATURAL SCIENCE INSTRUCTION.

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SECRETARY'S MINUTES.

FIRST SESSION.—TUESDAY, JULY 7, 1897.

The meeting was called to order at 3 P. M. in the Summerfield Church by Professor C. S. Palmer, President.

President Palmer delivered the presidential address on the subject, "The Preparatory Natural-Science Curriculum."

The following Committee on Nominations was appointed :

W. B. Graves, Andover, Mass.

E. Waite Elder, Boulder, Colo.

Irwen Leviston, Omaha, Neb.

Professor Albert P. Brigham, Colgate University, read a paper on "Physical Geography in Secondary Schools."

Professor R. H. Cornish, Morgan Park Academy, presented a paper on "Laboratory work in Elementary Physiography."

In the absence of Professor Charles E. Bessey, the subject of "The Microscope in the Public Schools" was presented by W. H. Skinner, Superintendent of Schools, Nebraska City, Neb.

Professor Edwin H. Hall, of Harvard University, read a paper on "Physics as a Requirement for Admission to College."

The discussion was opened by Professor Fernando Sanford, Stanford University, followed by Professor E. Waite Elder, Boulder, Colo. A general discussion followed.

SECOND SESSION.—FRIDAY, JULY 10.

After a pleasing vocal solo and an organ voluntary, the department adjourned from the Summerfield Church to cooler quarters in the courthouse.

Professor Alexander Smith, of The University of Chicago, read a paper upon "The Value of Chemistry as Part of a School or College Course."

Discussion was opened by W. A. Noyes, of the Rose Polytechnic Institute, Terre Haute, Ind.

Professor Charles R. Barnes, University of Wisconsin, spoke on the subject, "What Can the High School Do With Botany?"

Discussion was led by Miss A. Isabel Mulford, Botanical Gardens, St. Louis.

Professor Henry B. Ward, University of Nebraska, read a paper on the subject, "Zoölogy in the High-School Curriculum." This was discussed by E. R. Boyer, Englewood High School, and others.

Charles Newell Cobb, Albany, N. Y., offered the following resolution :

Resolved, That the sincere thanks of the Department of Natural Science Instruction are due and hereby tendered to the trustees of the Summerfield Methodist Episcopal Church, and to the county authorities, for places of meeting; to the citizens of Milwaukee and to the local committee for pleasing music, and for providing so carefully for the success of the sessions, and the comfort of those attending.

The Nominating Committee then presented the following names for officers for the ensuing year :

For *President*, P. C. Freer, University of Michigan.

For *Vice-President*, Charles Newell Cobb, Albany, N. Y.

For *Secretary*, Charles J. Ling, Denver, Colo.

The report of the committee was adopted, and the officers declared duly elected.

A vote of thanks was tendered to Professor Palmer for his work as President and his efforts in organizing the Committee of Sixty.

The department then adjourned.

IRWEN LEVISTON,
Secretary.

PAPERS AND DISCUSSIONS.

PRESIDENTIAL ADDRESS.

THE PREPARATORY NATURAL-SCIENCE CURRICULUM.

BY CHARLES SKEELE PALMER, UNIVERSITY OF COLORADO.

As we approach the consideration of our problem, let us keep our vision high and clear by a momentary glance at Plato's statement of the ideals, in the trinity of the true, the beautiful, and the good. But perhaps our practical occidental philosophy would add: Yes, the true, the beautiful, and the good in thought and in action, and in the memory of the past, in the realization of the present, and in the anticipation of the future.

Now, just how and where and when does our preparatory natural-science curriculum articulate with these great elements of discipline, culture, and character? To illustrate the reply, we will refer in detail to the arguments *pro* and *con.* urged regarding a typical preparatory curriculum.

In the discussion I shall describe what I believe to be one of the best preparatory science courses ever carried on, and shall give the arguments therefor because it is the course I understand best, the course essentially to which I have given ten years of support, and with a fairly successful experience; and, further, it is approximately parallel with the standards of many of the best high and preparatory schools in the country. It may be outlined as follows:

First year — physical geography.

Second year — physics.

Third year — chemistry.

Fourth year — biology.

The arguments advanced for this scheme are as follows:

Firstly: Physics, chemistry, and biology are the fundamental natural sciences, without which no sure progress can be made in any other complex sciences, as astronomy, geography, meteorology, etc.

Secondly: The order, physics, chemistry, and biology, represents the logical order and dependence, thus: physics, matter and energy; chemistry, the kinds of matter; biology, living matter.

Thirdly: The students coming from the grades to the high school have usually but little acquaintance with general natural science; further, they are not quite prepared for technical laboratory work. Now, though physical geography or physiography (of the present day) is not a fundamental natural science, yet it may serve well to give an outline of the sciences, and (especially if coupled with manual training) may serve to prepare the student for the more sharply disciplinary sciences of physics, chemistry, and biology.

Fourthly: The student will become one year more mature in the course of the incidental sacrifice of one science for the higher ones.

Fifthly: The arrangement, physics, chemistry, and biology, is supposed to give the student a general glimpse of all the fundamental sciences before he comes to college. It does not work a hardship in compelling a premature specialization.

The arguments against such an order as this are somewhat as follows:

Firstly: Physics, the most fundamental natural science, considered for its own interests, cannot be well handled without a considerable knowledge of mathematics; and it should be noted as significant that nearly every special report on this point advises that physics be postponed to the last year or years of the high-school course. But this breaks up the logical continuity of the three fundamental sciences — physics, chemistry, and biology; and it also subjects all the others to the interests of one, *viz.*, physics and, incidentally, mathematics.

Secondly: It is urged against the strict logical order just recited that the word "logical" begs the question as a practical matter. The best theoretical order may be one thing, but the best practical order may be an entirely different matter, for the actual dependence of one natural science on another may be overrated. (For one I may state my unhesitating opinion that chemistry is practically dependent on an elementary knowledge of physics, but mathematical physics is not requisite for good elementary chemistry.)

Thirdly: It is justly urged against the "logical" arrangement of three or four natural sciences, whatever may be the order, that, as each study is taken up for only a year and then dropped, a consecutive interest in all the studies cannot be developed, and if a special interest should be awakened in any or each particular study, it is interrupted as that study is dropped and another begun. The more advanced student may clearly

see the logical connection and dependence of the different lines of science. A questioning of the individual student will show that, as a rule, he does not feel the logical connection ; but that he does feel the wrench of the interruption.

Is this only one of the evils incident to checking the tendency to premature specialization, or is it a bad educational policy to awaken an interest only to kill or, at least, interrupt it? To break in upon a genuine interest in any study may be a most foolish and dangerous error in our main purpose—to develop students.

Fourthly : It is urged against an arrangement with physical geography as a sort of “a sacrifice hit” in the first year that this study is not only an informing, but also a disciplinary, study ; that, as such, it may well compete with physics or chemistry or biology, and should have equal right in the allotment of the four-years’ preparatory course.

Now, whether physical geography can compete with physics, or chemistry, or biology in the sharp discipline of laboratory practice I am not prepared to say ; but the historical shaping of the curriculum suggests that only well-systematized specialties should compete with the narrower, but more highly disciplinary laboratory sciences. It must be remembered in any event that a natural-history knowledge of earth, and water, and air, as general information only, is in itself an element of culture of fundamental importance.

Fifthly : It is urged against the scheme of three or four sciences, with one year only for each, that, even supposing the student should see the logical connection between the three or four one-year’s work, even then the quantity of each subject covered in a year is too small. That is, would it not be safe, and economical of time, energy, and interest, and productive of good discipline and a fair knowledge, to require two or three years’ work on one science ?

Now, waiving for a moment the theoretical objections against such a radical proposal as this, the practical arguments against it are, firstly, that it would throw too large a burden of expense upon the high and preparatory schools in the way of fitting up laboratories for advanced work commonly considered as collegiate in grade ; but this argument can be overcome, at least in special cases, by getting the funds necessary for the desired equipment. A second objection to a scheme for two or three preparatory years’ work on one science is the supposed inability of most high-school teachers to handle well more than one year of any single science ; but here we would all advocate the employment, in the high school, of teachers qualified by special training ; and this is being done in many cases. A third objection would be found in the lack of co-ordination, if some schools should offer three or four sciences of one year each, while other schools are requiring several years in a single science.

Now, this third difficulty is more apparent than real. I may say, by way of confidence, that the just estimation and comparison of many varying courses by one standard is one of the problems for the Committee of Five, organized at our suggestion and now in session with us.

But to consider the theoretical advantages or disadvantages of the proposal to devote several years to one science, let us revert for a moment to the broad sense of culture suggested by Plato's trifolium. We all know that the prosecution of a natural science illustrates all of these elements: the true, as in scientific fact and scientific method; the beautiful, as in the taste and judgment employed; and the good, both in the implied loyalty to objective truth, and in the unselfish courtesy and confidence displayed toward other lines of work. Or again—to take a concrete, inanimate illustration—iron is iron. In the crowbar, iron represents hard, working fact—the true. In the suspension, or truss, or cantilever bridge, iron represents both working fact—the true, and also most exquisite taste in construction—the really beautiful. In the compass, as the iron needle swings in line with the unseen magnetic meridian, it represents truth in working fact, beauty in construction, and the good in loyalty to ideals. But, after all, this imagery is forced and fanciful, and please notice that the very unnaturalness of the figure is a suggestion of the next point I would make, *viz.* this, that we are able to make our science responsible for too much that is foreign to it, and for not enough in its own sphere.

We always listen with appreciation and delight to addresses showing the relation of science and culture. But, granting all that may be urged by broad-minded students in their enthusiastic defense of natural science, is not the appearance of these somewhat apologetic papers a virtual admission that culture has many elements, and, further, that natural science should not and cannot be expected to carry the whole burden of producing a well-rounded culture? Are there not other studies, foreign to the natural sciences of the present day, but not necessarily foreign to the natural-science student in his yearnings for truer truth, for more beautiful beauty, for nobler good? And should not these other studies carry their share of the responsibility? Will it not be a wiser and more economical policy to leave to the humanities language and literature, the main responsibility for the humanistic element in culture, leaving to the natural sciences their inherent function of training in hard fact, clever experiment, and logical method of theory?

Now, in teaching a natural science, do we not all strive to acquaint the student with these three elements, *viz.*:

Firstly, the actual behavior of things in the laboratory.

Secondly, the large mass of inherited and acquired information of books.

Thirdly, the correct use and application of the inductive and deductive methods?

Can anything less be justly rated as an adequate training or discipline in the elements of a natural science? And can this be done in any science in one year? Or, indeed, can it be done in less than two or three years, even in an introductory way?

And, further, if it shall have been well done in any one of the fundamental sciences, what pressing need or advantage in requiring the student to attempt a similar course in three or four similar sciences? Indeed, has the student time for all that in a preparatory course?

All this means, in explicit English, that the preparatory student should have at least two or three years' training in some one science, as either physics, or chemistry, or botany, or zoölogy, or even physical geography, if desirable and practicable.

But here — interposes our critic — not so fast. Such a course would lead to a premature specialization and would narrow the general view of the student. Not at all, we answer, if there be required a regular classroom exercise in reading, discussion, and essay writing in all of the other sciences, so that, in general information, the particular science studied shall be fully supplemented. And if the student knows one science fairly well, can he not almost instinctively apply the scientific method to the other supplementary sciences, at least as far as necessary, by reason of his intensive work in one?

But again our critic may interpose: Natural science includes both the inorganic and the organic, and, for a broad training, should not the student study types of both? But, notice, the words "inorganic" and "organic" still popularly carry the notion of an obsolete fetich, and an ever-growing progress shows that, in so far as nature can be studied at present, it consists in the application of the same mechanical principle to the same matter in what are familiarly styled inorganic and organic forms. For, if I understand the status at present, a vital or transcendental condition of living matter does not mean that a vital or transcendental force is the main subject of discussion in biology; but, rather, that the student considers only in different forms, and on the implied and incidental basis of a "vital state" (including physiology in its fullest sense), the same transformations of energy and the same varieties of matter in the organic as in the inorganic world. Regarding this "organic" or "vital state," or "force," or "energy," or "substance," let the future bring what it will, we are not skeptics, but for the present we may say, in the words of the Psalmist: "It is high, I cannot attain unto it."

Practically, then, for the scientific student there is only one kind of natural science; the terms "inorganic" and "organic" imply superficial or artificial distinctions, for the scientific method is one.

But there is another very strong practical argument for the advisability of a course of two or three years in some one natural science, with supplementary reading in the others. It is this: We frequently find in the good country high schools—and they are very numerous—one teacher carrying all the natural sciences, and he or she is usually a specialist in a small way and an enthusiast. Now, is it better for this enthusiastic specialist to dilute his enthusiasm and to spend it over three or four subjects; or to urge him to make himself strong in the only way possible, strong in some one line, say physics, or chemistry, or biology, and to spend three of the four years' course on this specialty? Then, in the latter event, could we not look to the preparatory student for some accuracy in knowledge, expertness with apparatus, clearness in thinking, breadth of view, and strength of enthusiasm, and all as the inevitable result of studying some one thing thoroughly?

Now, this may seem almost too radical, but allow me to suggest a scene for you to construct in imagination. Let us suppose that the historical course of education had been reversed, and that natural science, well taught for centuries, were holding dominant sway in all the schools of learning to the exclusion of all philology. Suppose that suddenly a new wave of language study should advance in rivalry with the old scientific culture. In such hypothetical circumstances, what would the conservative natural-science people think of the dignity and thoroughness of a natural-language course of four years, with, say, one year in English, one year in Latin, one year in French, and one year in German? Now, such a language course could claim all the arguments advanced for our present course of four sciences of one year each. But would our supposed science censors listen for a moment to such a feeble, incoherent, undignified proposition? They would refer it back indefinitely, until the language people should present a course representing some simplicity, strength, and thoroughness.

Now, let us glance back from that picture, and try to look at ourselves. Elated at the freedom from the old-time "fourteen weeks in physics," or "fourteen weeks in chemistry," and the like, we have actually boasted that our standard was provisionally satisfied by not less than one year each in three or four sciences.

But Rome was not built in a day, neither will our ideals be soon accomplished. Now we can see the oncoming of a new standard with a better motto, *viz.*, three years at least in any one of the fundamental sciences, and supplementary reading in all.

Does this seem a too absurdly new and radical departure? In all this I have tried not to argue for any bias or prejudice. I must confess that I have been carried far beyond my customary position, but it has been almost against my will and by the hard logic upon which I have only

touched. There are a multitude of new questions which are inseparably connected with the new standard. I must not hope even to mention these at this time, but I do feel in such moments, more than ever, this verity, that the best and most advanced of us are but as the inexperienced novice, or as the pioneer in a dense forest. We are bound to make some mistakes, but the main highway is in sight, and let us profit quickly by our mistakes.

This, then, is the status: an alternative between three or four sciences of one year each, and three years in one science, supplemented by collateral reading.

The former has the ground; it seems easy of accomplishment by the high school; it gives a fair all-around outline of the fundamental sciences; it gives some little discipline; it postpones specialization until the college course.

The latter is new; it seems at first hard to accomplish, but its high standard will call better teachers of science into the high schools; it may also give a fair general knowledge of the sciences; it will certainly involve a degree and quality of discipline not to be surpassed by any other work in the limits of natural science; it involves no more specialization than the good, dignified old classical preparatory course; it may be combined with the other essentials of discipline and culture, so as to make a strong course, and incidentally it will strengthen the student in all his other reading by reason of the power to do intensive work; and, speaking for natural science, it will remove from that the charge of superficiality and dilettanteism now justly urged against our one-year courses. It goes without saying that many details will have to be worked out, to sift out the important and to work out a scheme of laboratory experiment, book-fact, and logical method suited to the minds of the secondary schools. But, granting all that may be said in its favor as compared with the older course, it will be well to make haste slowly and to study its details for a clear statement, before taking any rash or revolutionary steps.

PHYSICAL GEOGRAPHY IN SECONDARY SCHOOLS.

BY ALBERT PERRY BRIGHAM, PROFESSOR OF GEOLOGY, COLGATE UNIVERSITY.

The plea of this paper is that physical geography, including the history of land forms, should have an established place in secondary education. This cannot mean less than one year of sustained work, so pitched as to demand the best powers of the student.

I propose to urge my thesis chiefly upon its claims for culture, and under two heads—information and discipline.

Here is a great body of facts about the world in which we have our home. These facts do not merely supply essential knowledge for our daily conduct; they enlarge the mental horizon, add to our dignity and sense of responsibility as citizens and rulers of the world, and, in a large way, help us discern and handle the problems of life and society. No man is prepared to think truly who does not, in some measure, appreciate the world and its organisms as evolutionary. We deal with facts, but with facts genetically related, and hence not nakedly informational. We study concrete things, to be sure, but in the light of their history and as having their goal in man. For this point of view the secondary school has no resource but geography. If we seek illustrations, they are legion: the origin and development of our planet, in its larger features; the making and meaning of natural scenery; soils, economic minerals, and earth resources. What right has the school to leave any mature pupil ignorant of the nature of coal and of the geographic conditions of its origin? Can anyone weigh the saving to this country, if the farmer and the legislator understood the prolonged genesis and the supreme value of soils? How many know that a building stone ought to have in a wall the attitude which nature gave it in the quarry? The complex functions of a river, the structures that border it, the fascinating chapters of its history, are material of rational geography, falling daily under the eye of man and, if understood, enriching all his thought. Lead a boy to inquire why Chautauqua's waters seek the long way to the gulf, instead of spilling over into the adjacent Erie; then show him how the Alleghany, and, perhaps, the Monongahela, once drained northward, and you have widely extended his mental view. Finally, initiate him into the principle of the base level; show him that all land surfaces tend toward that goal; display before him the forms that intervene, and the vicissitudes that interrupt the process, and you have given him a range of information that runs all the way from the severely practical and utilitarian to the distant and the ideal.

But geography is a discipline. In a rarely complete and symmetrical way the mental powers are brought into exercise. The old geography taxed the memory. The new geography trains the memory.

In its service to the observational capacity and habit, geography is not behind any other science. Here the deficiency, even among educated people, is startling. And it is especially when out of doors that they see and do not perceive. The average man has no sense of topography. He cannot tell time by the sun, is in peril if left alone in the woods, could not describe the clouds which he saw while the storm was coming up, or give a true and vivid account of a ride in the country. Schooled to the

last degree in other disciplines, he has been blinded to Mother Nature and is an orphan in the midst of his home. It is in the training of the observation that representative geography, and all forms of laboratory exercise in geography, have their largest value.

It is, however, in the exercise of the reason that geography offers its best service as a discipline. To run from effect to cause, from cause to effect, to compare, to judge, to classify, is the unceasing prerogative of geography. It is of less worth to know the area and tonnage of the great lakes than to know something of their history. The materials for such instruction are now available to the alert teacher. Successive stages in their history are inferred from a series of elevated shore lines. The passage of a beach into a moraine in western New York argues water in one part of their basin and ice in another. Varying levels of the same shore line prove subsequent tilting of great areas of country. Various considerations argue for and against the presence of marine waters in the earlier stages of the history. To bring this single theme to the understanding of a high-school class would be to it a revelation, for it does not occur to one man in a hundred that these bodies of water are the result of physical history, much less that the chapters of the history can be reasoned out and made to live again.

"Man is what he eats." Let us make it broader than that: Man is *where he lives*. To trace out such connections is the business of geography. We shall sometimes blunder, but we shall find a sure substance of truth. Rossiter Johnson says that secession was an attempt to make two sovereignties where there was no natural barrier. Let the teacher get hold of that truth. Let him seek for comparative facts. "The kingdom of Poland passed out of existence because it had no natural boundaries." Contrast Greece, Spain, Switzerland, Scandinavia, Great Britain. Follow up the relation between mountains and history, or shore lines and history, and see how fruitful it becomes for the reason and for the whole intelligence. Trace the isothermal of 48° at Cape Ann, across New England, southward into Georgia, straight north into Ontario, west by Detroit and Chicago and the Black Hills, south into New Mexico, far north again, south around the Pacific mountains, north and into the western ocean at Puget Sound. How profound the bearing of this elaborate curve upon the economics and history of the United States, and how rich the field for rational teaching!

Some one has said, in substance, that whatever increases our interest in that which is remote in time or space enlarges our culture and promotes our dignity as thinking beings. We emphasize, indeed, home geography, not chiefly because it affords convenient knowledge, such as how to drive to the next town, but because it unfolds principles, yields types, and helps us conceive the larger and the unseen. To come to the point, no other

school subject so exercises the constructive imagination as does the new geography. The pictures of other continents and of other times must be sketched and colored by rallying the student's highest powers. This means a high order of teaching, but of this we are not now speaking. Give appreciation of the subject, and this will raise the order of instruction to its proper level.

We emphasize here the historical and time sense. The earth is not dead. There are no "dead" geographic forms. There is not even stagnation. The earth never hibernates. When Mark Twain was a cub pilot on the Mississippi, it distressed him that he must learn twelve hundred miles of river. Then he must learn it both ways, must know it at noon, and know it in midnight darkness. Then, when he learned it, he said: "Won't it go fooling around?" Ah, precisely that. The earth is all dynamic, vital, evolutionary. It has been so for eons. Geography is not taught till this conception is gained. Here, in the secondary schools, is your only opportunity to give this vastly important sense of duration, of events transpiring upon a background of infinite time. You cannot tax children in the grades with it. They cannot receive it. You cannot depend on courses in historical geology, or on the college, for most will have experience of neither. Rational geography will give this rich enlargement to the intellectual life, and go far to wean it from the narrow, the conventional, and the untrue. Here is your opportunity to gather up the ripest fruit of the most pervasive doctrine of our time, evolution.

The æsthetic and moral value of an introduction to genuine geography enforces its claim in no meager fashion. These considerations emerge naturally in this field. The world is a constant and high revelation to him who holds its secret. Nature, as affording refinement and repose for all, must be interpreted to the scholar, else his education is partial and without symmetry. This is the one science whose materials of observation are at hand throughout life, though balance and measuring rod and microscope and books be absent. In this field, therefore, knowledge may, after preliminary training, grow almost without effort. It is a tree which must grow tall and send out spreading branches, when once the seed has germinated. With singular unanimity eminent men and women have summed up the influence of Niagara as a sense of peace for the spirit. Some one, perhaps Emerson, touched this moral quality of things when he said: "Nature is loved by that which is best in us." The Geologist Ramsay, taking his nooning in the presence of a far view on one of the Welsh mountains, wrote: "As I looked I felt my heart soften, and I arose a better man again." Russell, daring, and all but conquering, the highest point of Mt. St. Elias, said: "The fortunate traveler who stands on these commanding points in brilliant weather will have a charm added to his life of which no changes of fortune can deprive him." And Whit-

r, fully appreciative of the curative power of the world where man finds home, wrote :

How the eye and ear
Are starved amidst the plentitude
Of nature, and how hard and colorless
Is life without an atmosphere.

Geography, then, is not a bread-and-butter theme, though supremely practical. It is not chiefly an informational theme, though rich in store of fact. It is not an easy or a dull theme, but full of substantial difficulty, and throbbing with interest. Because it makes so broad an appeal to the eye and reason, to imagination and taste, it commands interest and asserts thus its pedagogical value.

I have asserted the educational value of geography in no measured terms. I have hinted at a geography which is too advanced for the grades, important to be omitted, and which most will not reach in college.

My testimony is not without strong support. Says Archibald Geikie : "I have long been of opinion that geography in this sense of the term ought to form an essential part of education. It ought, as a matter of course, to occupy a distinct and important place in the curriculum of every school." Keltie, in his well-known report, says of geography in many places : "It is a serious subject of education, legislated for by the Government, and taught to a large extent by trained teachers." It was Mr. Keltie who wrote : "Nothing is better calculated to awaken the healthy natural intelligence than geography." An English schoolmaster, writing of physical geography, says : "It was eagerly studied and brought out with devoted enthusiasm in some of what were thought the stupidest and most backward boys." Superintendent A. F. Nightingale enumerates physiography as one of the subjects which "are no longer to remain in the category of optional studies, and suffer the opprobrium of being contrasted with mathematics and the literary as the sole dispenser of intellectual culture." Mr. Nightingale said : "A worthy geography is no pariah among intellectual studies." And finally I quote the Committee of Ten : "There can be no doubt that the study (as proposed) would be interesting, informal, and developing, or that it would be difficult and in every sense substantial."

Much has been made of the admission of the conference report to the Committee of Ten that the literature of geography was not in good form. It is much less true today than when the report was written, and is at least a temporary consideration. There is too much geology in it, to say the least. I reply, not overmuch, and add that between the geology and geography no sharp line can, or need be, drawn. Nor does Professor Huxley's objection hold that strong courses in physics, chemistry, mineralogy and biology are pre-essential to physiographic work. All of this is

desirable, and much of it is necessary to the teacher, but the pupil is not to be denied rational geography till he present this preparation.

Where, then, shall we put geography in the high school? On this I defer to experienced makers of secondary programmes, but I urge again that it will not do to put it into the first year on sufferance, waiting for developing "science in the grades" to pull it down to a lower horizon. Better send it forward to the third or fourth year, and get first as much as possible of the physics, chemistry, and biology, which all of us agree with Professor Palmer in counting important.

The culture offered by the new, rational, and higher geography is too broad and too precious to be denied to the great body of educated men and women. That we have not yet a competent body of teachers I grant, but this, too, is a matter of brief time. And we must not forget that geography cannot be taught in the grades until the grade teachers get it in the high schools. The universities will equip the high-school teachers, and they, in turn, will do like service for those below them. I have no fear for geography. "Truth is a good swimmer." The writer was trained to the classics, and the most conservative stickler for Greek and Latin could find no fault with his bachelor's degree. Everyone knows that Greek and Latin have grown green in the new educational freedom. They are no longer dead, but have become living branches of the tree of knowledge. Latin could not be put out, and geology cannot be shut out. Taught rationally in the grades, it asserts its rights in the secondary school, and holds its distinctive ground in the college and in the university.

LABORATORY WORK IN ELEMENTARY PHYSIOGRAPHY

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In planning the work which I shall describe, I have assumed the following propositions as self-evident:

1. That it should be the constant aim and duty of the teacher of science to bring his pupils into as close and vital relation with the facts and phenomena of science as the nature of the subject will permit.
2. That at the lecture table, or in the laboratory, or in the field, he will seek to bring about this relation.
3. That the laboratory or field work of any science should be used in connection with a course of lessons based upon a text-book, and that a large amount of explanatory work will be necessary, in order to make the work of the laboratory profitable.

4. That the exercises presented in the laboratory or in the field should have a definite end in view; that they should be presented with clear and unmistakable directions, telling the pupil what to do, but not what result to expect; where to look, but not what to see.

5. That no necessity is upon us of urging the desirability of laboratory work. All teachers admit that laboratory methods are the best, wherever the necessary time can be obtained, and where the classes are too large.

The questions I have sought to answer are these:

1. Is physiography capable of the same kind of laboratory illustration as physics is?

2. Can the laboratory work for physiography receive the same emphasis that we put upon it in chemistry?

3. Have we sufficient means of illustration in this branch that can be brought into the hands of the individual pupils?

4. Is this material so accessible that teachers who have not been provided with the greatest possible advantages can avail themselves of it?

It will be readily observed that the facts and laws of physics can be made, by wise planning and direction in the laboratory, matters of immediate knowledge. In most cases the student can himself discover or verify the law or determine the value of the constant. By direct measurement and comparison, by weighing and testing, the student discovers the fact, or becomes acquainted with the law. This immediateness of contact with the facts, this directness of contact with the phenomena, makes physics an ideal subject for laboratory study. This same advantage exists also in equal degree to chemistry, botany, zoölogy, and mineralogy. In all these sciences the student deals directly and at first hand with the subject-matter in the laboratory.

The facts and phenomena of astronomy, geology, geography, and physiography are, as a rule, not so accessible as the facts of the other sciences. Some of the facts of the latter group of subjects are matters of easy observation. The student knows that the sun rises in the east and sets in the west, and that from winter to summer it climbs up the meridian. He will find some of the physiographic forms he reads about illustrated in his own neighborhood, and in the rocks of the vicinity he finds illustrations of some of the minerals and rocks of which the crust is composed. Yet, when we reflect upon the number of facts that confront the student in any good text-book of physiography, we must confess that the number of these facts of which the student will have a direct idea is comparatively small. Knowledge of the volcano, the earthquake, the ocean current, and the mountain is not acquired in most cases by personal experience. Whatever facts are known about these and other topics in physiography must come to the student through some

medium. This medium may be the text-book, the picture, the diagram, the map, or the constructed model. The teacher will, of course, use all the facts that his neighborhood furnishes for illustrating his subject. His great problem will be to illustrate adequately and properly those other and remoter facts which constitute the larger part of the subject. If laboratory work be possible in the case of the latter group of sciences, it will, from the necessities of the case, differ to a considerable extent from that possible in physics and chemistry. Much of it will consist in bringing the student into contact with the sources of knowledge upon which all scientists must rely for information upon topics outside their own immediate field of investigation. Some have questioned whether laboratory work in elementary physical geography could be anything different from the library method frequently pursued in history. Before describing the exercises, allow me to explain the weekly programme. The work in physiography belongs in the second year to the academy. It is the first work done in science, physics, and chemistry following it, in the third and fourth years, respectively. The class met five times weekly throughout the year. Of these five weekly exercises two were regularly prepared recitations of one hour each, two were laboratory exercises of two hours each, one exercise was an unprepared recitation. Thus seven, and sometimes eight, hours were spent weekly with the instructor. This division of time between laboratory work and recitation is the same that is made for physics and for chemistry. This paper deals with the work done in the laboratory, and not with the work done in recitation. For convenience, I will divide the laboratory work into two parts, as follows :

1. Laboratory exercises with apparatus, including map study and construction.

2. Laboratory discussions and library exercises. Without attempting to classify the exercises given, I will now briefly describe what work has actually been done by the class. Physiography naturally divides itself into four divisions: (1) the earth as a planet; (2) the air; (3) the ocean; (4) the land. The exercises which I describe have touched on all these topics, but not with equal emphasis.

I. LABORATORY EXERCISES.

1. Construct a diagram which shall represent some of the facts of the solar system, including (1) relative distances of the planets from the sun, (2) their sizes relative to each other and to the sun, and (3) their satellites. Two days.

2. On the same sheet, which was about 80" \times 18", construct a diagram to show (1) the inclination of the earth's axis to the plane of its orbit, (2) its perihelion and aphelion positions, and its position at the equinoxes and solstices. Two days.

3. Measurements of the sun's altitude by means of the clinometer. One day.

The aim of these exercises, and of the class discussions which are taken up at the same time, is to fix in the mind of the student, by constructions and demonstrations on the globe, the chief facts of mathematical geography and elementary astronomy. The location of the principal constellations and of the celestial equator and ecliptic might well be added to the exercises described above.

4. Plot curves to show the minimum, maximum, and average temperature, the barometric pressure, and the rainfall from records kept by the students for the month of December, 1896. Two days.

5. Determine the dew point of the room and the relative humidity. The dew point was determined by means of the thermometer, calorimeter, and ice. This exercise was preceded by the study of a centigrade thermometer, and a comparison of it with the Fahrenheit. Relative humidity was determined from the published table. Two days.

6. Illustrate the constituents of the atmosphere: (1) dust, (2) water vapor, (3) carbon dioxide, (4) oxygen, (5) nitrogen. (Teacher's experiment.) One day.

The students by turns kept the record of the maximum, minimum, and standard temperatures, and of the rainfall, wind direction, and barometer, for a month, and the construction and method of reading these instruments were learned. The records were then used as the basis of the exercises given above.

7. Construct a map showing the draining slopes of the United States. One day.

In this exercise the smaller outline map devised by Professor Channing was used.

8. Preliminary study of a topographic map. Three days.

9. Study of a coast-survey or lake-survey map. Two days.

10. Study of the Washington weather map. One day.

11. Study of the North Atlantic Pilot Chart. Two days.

In these exercises we made use of the admirable illustrative material which the United States government and several of the state governments furnish, some of it at no expense, and some at very small expense. This material and how to get it is described fully in that very helpful little pamphlet by Professor Davis—Collie & King—called "The Use of Government Maps in Schools."

The detailed directions that were given to the students in the use of these maps will be given later on in at least one case.

The aim of these exercises, especially those using the topographic and coast-survey maps, is to teach the students to read the map and to see what there is on it. This ability to read maps and get their meaning is

of great importance to the student and should be cultivated. After this ability has been acquired, it is, in a subsequent exercise, utilized by exhibiting many topographic maps to the student and asking him to explain them, or, when too difficult for ready comprehension, pointing out their meaning to him. In these exercises the student was asked to construct profiles from the map, to select the best road between two given places for an imaginary bicycle trip, to note the amount of fall of the rivers. The details for the study of topographic maps are given in full in the June number of the *Journal of School Geography*.

12. Construction of a weather map from facts published in the daily papers. Two days. This is one of the most interesting and instructive exercises which we had. It calls into action a different set of faculties from those used in the former exercise on the study of a weather map. It serves to show, also, how accessible material is if teachers only know how to utilize it.

13. Construction of a river profile from source to outlet by the aid of topographic maps. Two days.

14. Construction of a profile around the earth at the equator, showing ocean beds and continental areas. Two days.

The river profile, when completed, shows the three portions—torrential, valley, and flood plain—into which most large rivers can be divided. The Housatonic, Naugatuk, Thames, and Farmington, in Connecticut, and the Passaic and Raritan, in New Jersey, were the rivers whose courses were studied.

15. Detailed study in the field of a miniature river valley, with measurements of width, length, number of turns, branches, directions taken with compass, and notes made of the same. One day.

16. Construction of a topographic map of the valley surveyed above (15), on a scale of fifty feet equal to one inch, with contour lines at five-foot intervals. One day.

This was the first "field" work that we did, and it was very instructive. The valley chosen was admirably adapted to the purpose. It was about 1,500 feet long, through clay, and had five turns and side valleys.

17. Excursions to several points of interest, including a sand dune, a glacial moraine, and a limestone quarry. These excursions may become the most profitable part of the work, and they can be greatly extended in number, provided classes are not too large, and points of interest are accessible.

18. Study of common minerals and rocks. The collections studied have been the Boston Natural History Society's collection, described in Crosby's "Common Minerals and Rocks." This includes twenty-five of the commonest minerals and more than this number of the commonest rocks. This work will be extended to include the Washington School

Collection No. 2 (forty minerals) and No. 3 (forty rocks). The latter excellent collections are put up by E. E. Howell, Washington, D. C. This study has included the identification of the minerals and rocks in these collections by means of their physical characteristics. This work could be extended indefinitely by including the blowpipe characteristics. I think the aim should be to teach the student to identify the more common rocks and minerals at sight in the field.

This part of the work, including both the laboratory and text-book work, constituted about one-sixth of the whole course, or about six weeks. In addition to the small collections mentioned above, a large collection was available for this part of the work.

19. Study of typical topographic features, with their various modified forms, by means of selected sheets of the various government and state surveys. The accompanying descriptions, posted on the back of the sheets, were taken from "The Use of Government Maps in Schools," already referred to. Eight days.

20. Several stereopticon exhibitions of pictures illustrating (*a*) facts of astronomy and the earth's relations as a planet, and (*b*) typical physiographic features. Slides for the latter illustrations were chiefly those in the list prepared by Professor W. M. Davis for the use of the Cambridge grammar schools.

This map study, with the accompanying lantern illustrations, formed the final review. The features studied included plains, plateaus, mountains, valleys, shore lines with their various modifications; and the previous detailed study of the various government maps had prepared the student to understand what these maps expressed. To vary this part of the work, maps were frequently shown the student, and he was asked to interpret the surface of the region represented.

21. Enlarged reproduction of Professor Powell's map of the physiographic regions of the United States by means of the pantograph. This was not a class exercise, but was assigned to one pupil.

II. LIBRARY EXERCISES AND CLASS DISCUSSIONS.

I will give a few of the topics which have been presented for class discussion:

1. What reason have we for thinking that the earth probably rotates on its axis?

2. What actual proofs have we that it does rotate?

3. What is "the front" of the earth, and when are we "in front"? Question preliminary to the last: (*a*) What is the front of a moving carriage, (*b*) of a moving trolley car, (*c*) of a baseball in motion?

4. What is the sun's position at noon at the solstices and at the equinoxes to an observer at (*a*) the Tropic of Cancer, and (*b*) at the arctic circle?

5. Travelers go to northern Scandinavia to see the midnight sun. How far north must they go in order to see this phenomenon, and, when they see it, where in the heavens is the sun located?

6. How can a river abandon its valley or a part of it?

7. What becomes of the water that falls as rain?

8. Why do some fresh-water lakes seldom freeze?

Among the topics for library exercises have been the following:

1. The origin, function, and "death" of lakes.

2. The facts concerning existing glaciers, and the evidences of past glaciation.

3. Rivers as erosive agents.

The difference between these two classes of exercises consists in this, that in the former, which have been called laboratory or class discussions, the problem is put before the student in the form of a question, which he is to solve by means of facts which he already knows or which he is to solve under the teacher's guidance and without access to other books than his regular text-book. In the library exercises the pupil was referred to the literature of the subject, and asked to find answers to the questions given from the printed page. Specific references were given, and the student was expected to look up as many of these as time permitted and to write his answers in his notebook, after which they were read and discussed in class. As an illustration of the kind of questions that were given to the class in connection with the laboratory exercises, I will give the details of the study of the North Atlantic Pilot Chart. This may serve as a type of the method of map study. The laboratory work was conducted class-wise; that is, all members of the class were engaged upon the same exercise at the same time. Each student or group of two being supplied with a copy of the North Atlantic Pilot Chart, or the North Pacific Pilot Chart, the following questions were given, which the student was asked to answer in his notebook:

1. The name of your map and the date of its issue?

2. By what department and bureau, and for whose use, was it issued?

3. How many different symbols in red and how many in blue do you find, and what do the reds, as a whole, signify as contrasted with the blues?

4. Tell what each symbol in red signifies; (a) continuous lines, (b) dotted lines, (c) arrows.

7. The horizontal black lines are parallels, and those at right angles to the parallels are meridians. Compare their distances apart and their directions with the same lines on an ordinary map. What is the difference?

8. Are the 10-degree parallels all the same distance apart? Which are farther apart?

9. Your map is made after what is called Mercator's projection. What is this, and what are its advantages and disadvantages?

10. Explain fully and carefully the meaning of one of the symbols in a 5-degree rectangle.

11. "Box the compass."

12. What is the general direction of the red storm tracks and of the ocean currents?

13. Why is it that the sailing and steamship routes on the map are, as a rule, curved lines?

14. Compare two charts, one of a winter month and one of a summer month, and note their differences.

In conclusion, allow me to call your attention to the following points which have been made: (1) That the course as given covers one year of five recitations per week; (2) that about an equal division of time has been made between the study of a text-book and the laboratory work; (3) that the laboratory work has been given a definite place in the weekly programme, and that the aim in these exercises has been to arouse the interest of the student, and to lead him to think and work. Some of the exercises described are suitable for grammar-school grades, and none are too difficult for the high-school pupil. The exercises are, I hope, suggestive of what can be done. They may, at least, furnish a starting point for discussion. That they have proved interesting I feel sure, and the interest of the student in the subject determines in large measure the profit he derives from it.

THE MICROSCOPE IN THE PUBLIC SCHOOLS.

BY W. H. SKINNER, NEBRASKA CITY, NEB.

I would say that the microscope should not be made a pyrotechnic display. Oh, there is wonder enough at all times! This seeing so large what is so infinitely small is an unceasing wonder; but that is not the use of the microscope. Moreover, to see the myriads of forms of life that exist in a single drop of water is not enough. As soon as possible get beyond the stage of using the instrument for wonderment's sake.

The microscope should be used to group related facts. There should be method in the work; one step should lead to another. And all along there should be enough of familiar talks to the pupils to make them see the meaning of each and all the facts, in case they cannot be led to discover these meanings for themselves. Let us glance hastily at some of the subjects in which it may be used. If the study is zoölogy, begin

with the unicellular forms; the amœba, the monad, the paramecium, the bell-animalcule, etc. Lead pupils to see how these eat, what they eat, how they assimilate it, how they grow, and how they reproduce. Compare with the human structure. Here is an animal without stomach, heart, arteries, veins, lungs, or brain, and yet it performs all that is necessary to life and to the perpetuation of its species. Let it be seen how this is done. Those cilia, that opening, those aggregating particles of food that grow into food balls and then disappear, that curious contractile vesicle, are all we can see, and yet the animal lives and moves and has its being. Now, these facts must not be seen as unrelated. Facts alone are not mighty things. The fundamental truth for which a fact stands is the thing to look for. Hence, we must see the meanings of things. I emphasize this because of the popular misapprehension of the value of microscopic study. Or take botany. Begin with the unicellular. Study life history. Watch the plant grow and reproduce itself. Then, following the loosely joined line of cells of nostoc, the firmly joined ones of spirogyra, the branching filaments of cladophora, the larger cells as seen in the moss-leaf (or better in an ulva), reach the layer upon layer of cells as seen in heavier leaves, and you follow cell development from a point to a solid, to use a figure of speech. Or, if it be reproduction, note the fission of cells, the internal formation of cells, the budding of cells, or the conjugation of cells, which last seems the climax of provision in both animal and vegetable life. Thus we may make the microscope an instrument for leading pupils to the discovery of ultimate truth.

There is an advantage in taking unicellular plants and animals. Their form, structure, and functions are simple. The pupil may see the simple with a more complete view. It enables him to understand the complexity of higher forms more easily and more completely. It is the logical beginning, and very nearly the better beginning, for the study of both plants and animals.

How is this work to be done? Let me describe one way of doing it that has been found successful. In an eight-room building is one compound microscope. The time each week is divided among the rooms, giving a little more than half a day to each room. A mount stands in the room during this time. The pupils at odd times, when study of the lesson is completed, or at intermissions, pass to the table and examine the mount. They make drawings. Once a week the teacher makes a special mount and gives a thirty-minute study of it. She has two pupils go to the instrument. As soon as the first one is through, a third one goes forward. Thus time is not lost. The pupils pass from the microscope to their seats, or to the blackboard and make drawings. The teacher examines the drawings and, if they are faulty, sends the pupils back to re-examine the object. A short talk gives necessary additional

information. A half hour thus spent gives all a chance to see, and it is remarkable how much they see in a half minute. Many times the pupils get a second chance in the thirty minutes. This, in addition to what they have seen during the time the mount was standing in the room, for the half day, gives good returns. In botany, the children bring in fresh-water algæ, mildews, rusts, smuts, puff balls, toad stools, etc. They are told to look for parasites upon certain plants, the plant being shown them and its common name being given. They thus learn incidentally most plants and their names. In zoölogy, they collect stagnant water or make slow infusions of leaves, and the water is then examined. Sometimes the teacher makes more difficult cultures.

How far down in the grades may such work be done? As low as the first, in some cases. Most of it in the third grade, at least. Microscopic study of objects, after the object is mounted, does not differ from study of objects with the unassisted eye. The child finds less to perplex him in the study of a bell-animalcule thus mounted than he does in the study of the large Newfoundland dog.

But can the teachers do such work? With a little encouragement and assistance they can. The fault of conservatism lies, not with the teachers, but with the leaders of teachers: superintendents, supervisors, principals are the unprogressive people, who too frequently hide their lack of knowledge and their lack of enterprise under the cloak of conservatism, or under that stigma of ignorance which they cast upon teachers. My experience has been that, from the average up to the best, the teachers have been most willing and very successful in performing anything I have had the intelligence to ask for. They need help and direction, and it is just for this that principals and superintendents and supervisors are paid their salary. This is plain talk, but it is time such things were said.

PHYSICS AS A REQUIREMENT FOR ADMISSION TO COLLEGE.

BY EDWIN H. HALL, HARVARD UNIVERSITY.

I am to speak to you upon the topic of physics as a requirement for admission to college. First, do we want it? Second, can we get it? Third, in what form can we have it?

Much of what I have to say may appear trite and needless to western men, but, if it does appear so, I will ask you to bear in mind what happened, or rather what did not happen, at the so-called Columbia conferences held a little more than a year ago. President Low summoned

representatives from a number of the leading colleges and secondary schools of the East, to confer upon the matter of requirements for admission from schools to colleges. There was a conference for Greek, a conference for Latin, and one each for German, French, history, and mathematics. There was no conference, no invitation to conference, for any observational science. Agreement upon a requirement in such a science was a matter too hopeless even for discussion. This state of things in the East—and I am by no means sure it is very much better in the West—gives ample reason for such remarks as I have now to make.

The present age is, perhaps beyond all ages that have preceded it, objective in its methods. Even psychology has become an objective science, studied in laboratories with ingenious mechanical apparatus. After centuries of self-communion, mankind has opened its eyes to discover, to rediscover, the outer world and to enter into a new life, which in activity and in progress excels the old life as the day excels the night. Into this new life it is the duty of our colleges and universities to enter with their might; to make its activity more fruitful and its progress more sure, and, still more, to find and keep, out of the abundant utilitarian harvest that already lies before us, that finer fruit which is the nourishment of the spirit, and which it is the duty of true scholarship to find and keep in every field of human labor.

And the higher institutions of learning are not unmindful of this high duty. There is not a college in the country, worthy of the name, that is not giving, or actively preparing to give, to its undergraduates instruction in several of the observational sciences. The battle in that part of the field is won; yet much remains. No man liveth to himself, and no university liveth to itself. There must be between the colleges and the schools good understanding, co-ordination, mutual helpfulness. As the fathers of our republic, discovering and molding public opinion and desire, built up out of heterogeneous and sometimes discordant political elements the great fabric of our government, so must we, as earnest, far-seeing, patriotic men, build up out of the varied educational elements of the country, high and low, good, bad, and indifferent, a great national system of education—sound teaching in the public schools, leading up by many avenues to the broader opportunities of the universities. "It would be a pity," said President Eliot, speaking not long ago before the Harvard faculty of arts and sciences, "It would be a pity, if we could not adapt our courses in college to any *good* teaching done in the schools." In that one sentence is set forth the duty of both parties in this great business: the duty of the schools to make their teaching good; the duty of the colleges to recognize and build upon such teaching.

But what are the observational sciences which can be made the ground

of good teaching in the schools, teaching broad enough and deep enough and sound enough to merit specific notice in requirements for admission to college? Astronomy, botany, chemistry, meteorology, physiology, physiography, physics, and zoölogy have been proposed. Among all these I believe physics to be, on the whole, the best and the most practicable. It is more fundamental and elementary than any of the others, save, possibly, chemistry. It offers a greater variety of definite everyday topics of interest than any of the others, save, possibly, chemistry. Moreover, it can be treated from first to last by quantitative as well as by qualitative methods, which gives it a distinct advantage over most of the other sciences, chemistry included. I am well aware that the quantitative side of science teaching can be dwelt upon too much, or, rather, too exclusively, but the danger on that side is far less than on the other. Good science teaching and all other good teaching, no doubt, must throw the individual pupils upon their own resources. Now, it has long seemed to me that the teacher who attempts to lay out in physics, or in any other science, individual observational work which is not mainly quantitative has before him a task of enormous difficulty. Qualitative facts are apt to be very obvious or very obscure. A stone falls to the ground; everybody knows that. Why does the stone fall to the ground? Nobody knows that. How fast—under what quantitative law—does the stone fall? That is the kind of question we can take up in the laboratory with the least likelihood of wasting time and effort, although this particular question I hold to be rather too difficult for experimental treatment in ordinary school laboratories. Of course, not all scientific work can be quantitative. Not all of the best scientific work can be quantitative. But all of the best scientific work in any broad sense is characterized by a certain clearness of sight and rigor of logic, which are, in my opinion, best inculcated in young minds by quantitative work. Such work is for the young student of science what the “setting-up drill” is to the young soldier. It gives him an abiding sense of professional form.

I am much interested in propositions to recognize botany and zoölogy as requirements for admission to college, and I am glad that we are to have, on Friday, discussions of these sciences as school studies. I hope, however, that I shall be forgiven if I now express the opinion that botany and zoölogy, if they are to be accepted as requirements for admission to college, should, as a rule, be preceded or accompanied by the laboratory study of physics. I do not mean to imply that a boy or a girl must have had a formal course in physics before beginning the conscious observation of plants and animals. On the contrary, I believe that such observation should be encouraged and taught very early—in the primary school stage, or earlier still. It is precisely because such work is within the capacity of young children that I would not have it required for

admission to college. It should be assumed, not required. I should hardly venture to speak so freely upon this matter, if I did not feel myself to be in accord with distinguished representatives of the very sciences to which I have alluded. Botany, for example, was tried as an admission subject for Harvard College fifteen or twenty years ago. It was the ordinary descriptive, systematic study familiar to the schools. It was given up as unsatisfactory after some years of trial, and one of the most difficult tasks an educational reformer can set for himself today is to convince the botany and zoölogy professors of Harvard University that anything worth recognizing can be done by the schools in their departments. There is one prominent educational institution in the East, perhaps more than one, that now has botany as a requirement for admission. It is apparently about the same kind of requirement that Harvard used to have. I am not informed whether the authorities of the Sheffield Scientific School, the institution I have in mind, are satisfied with this requirement, which is a comparatively recent one with them, but I have heard a number of teachers mention the school study induced by it, and none of them favorably. I hope to see all the natural-history sciences, including physiology, recognized as requirements for admission to college, provided they can be put by the schools upon such a level as to presuppose a good knowledge of elementary physics and, perhaps, chemistry. As to meteorology, astronomy, and physiography, I find the prevailing opinion among my colleagues to be that the first named should not be taken up without physics, but that the two latter may be. I shall not enlarge upon or belittle the merits of astronomy and physiography as studies for young people. Their interest and their importance are self-evident. But these are largely out-of-door studies, and, as such, they are very heavily handicapped in competition with other sciences for a place in schools. Chemistry is, in my opinion, the only formidable rival to physics as a science requirement for admission to college, but yet among my colleagues at Harvard I find in the department of chemistry a very strong preponderance of opinion in favor of physics, rather than chemistry, for admission. If I do not quote the opinion of men in other colleges, it is merely because I am not well informed as to their opinion.

But there are difficulties, obstacles, on the college side, and on the school side. College faculties are generally controlled by men of middle age, and I have observed among such men a certain lack of enthusiasm, to speak within bounds, for the labor of revising requirements for admission, framing new requirements, investigating school conditions, and laying out courses of study to fit those conditions. This disinclination does not argue old-fogyism, or lack of energy; it is rather characteristic of men active and eminent in their profession. They are doing their work

in their own way with approved courses,—with an approved sequence of courses. Their years are fruitful, and they dread the loss of time which novel undertakings would entail. We must not look to them for help. We must not look to young men for new labors. Even young men taking up this elementary labor may feel that they are sacrificing something—ambition for research, perhaps. And so they may be for the moment, but young men are made for such sacrifices; they thrive on them. Let them take up and carry through the work of co-ordinating the colleges and schools to the great good of both, and twenty-five years hence, when some other great new work is to be done, it will be their turn to hold back and to declare themselves satisfied with the world as it is.

On the school side, too, there is conservatism and established routine. School principals in the East are not usually teachers of natural science. They are rather likely to be teachers of the classics, and, though I do not find such teachers, as a rule, unfriendly to physics, after this study is established upon a laboratory basis in their schools, I think they are sometimes slow to see the possibility of altering the school programme in such a way as to make room for any new study demanding much time. The laboratory teaching of physics does demand much time, especially in the school programme. That fact must be resolutely faced at once. It is, in my opinion, the most serious obstacle to the general adoption of such a course. Some former difficulties have now disappeared. Once the expense for apparatus seemed prohibitive, but fairly good apparatus is now to be had for a very low price. Formerly there was a lack of suitable text-books. Now every month announces a new book, each better than all before it, and the only difficulty of the teacher is to make up his mind which of all these books he will use. Formerly there was a dearth of competent teachers. Now this dearth is less. With all these improvements in the situation, however, there remains the difficulty—the impossibility—of doing good laboratory work in very large class sections. I still think, as I thought ten years ago, that, for the best results among young pupils, the laboratory sections should not be larger than twelve. The suggestion has been made that the more advanced pupils in the school may fitly be employed as laboratory assistants to look after the work of the less advanced, but to this proposition I cannot give my assent. I have too high an opinion of the difficulty and importance of laboratory teaching to be willing to intrust it to boys. Boy assistants may, however, lighten the mechanical labor of arranging and caring for apparatus, and this in a large school is no inconsiderable service. Would that I might find some way of impressing upon school principals and school boards the folly of burdening a science teacher with that kind of work, which can be done better by mechanics or by intelligent janitors!

The capable, willing, unlettered janitor! who shall prize him too highly? He is a staff unto the feet of the weary teacher and a fountain of wisdom unto his mind, when the bodily strength of the latter faileth him, and his wits desert him altogether. It is by giving every mechanical aid and relief to the teacher, and by this alone, that laboratory physics can be made practicable in the best sense in large schools.

However great the difficulties of our problem are on the school side—and I would not belittle these difficulties—they can be overcome if public sentiment demands the work; and in the forming of public sentiment upon such a question the influence of college requirements is tremendous. Whatever may be said in criticism of the experimental requirements in physics for admission to Harvard College, as they have been maintained for the past ten years, no one who has been familiar with the matter will deny that they have been the chief factor in revolutionizing the school teaching of physics throughout New England, and what Harvard has done there other colleges have done or can do elsewhere.

DISCUSSION.

PROFESSOR FERNANDO SANFORD, Stanford University, Cal.—Qualitative lecture-room experiments are not so essential. Independent laboratory work is preferable, if classes are small enough. The greatest importance is to be attached to scientific method in thinking. Actual notes should always be required. Four-fifths of the time should be given to laboratory work, and the text review should always come after laboratory work, but no text-book work before. Review should be conducted by topics.

E. WAITE ELDER, Boulder, Colo.—In connection with the physics committee of the Colorado State Teachers' Association, I have had occasion to learn what is being done on this subject in the schools of the country, and also what is expected by the colleges. In schools where good work is done in all departments physics is given its place. In these schools one year is devoted to physics, 37 per cent. of the time being given to laboratory work. Physics has been generally given in the second year, but the tendency is to put it in the third year, making it the mathematical subject of the year. Great stress is laid on the necessity of making the work elementary and of not attempting too advanced work. On the other hand, the colleges ask for elementary preparation in physics. They do not ask for more than the schools can do. They deprecate the attempt of some schools to do more than this elementary work. For this work the schools of the country are fairly well equipped, and it rests with the colleges to get what they want. The school will respond to any demand that the colleges make upon them.

MR. HARVEY spoke of the value of the aid of the microscope and of projection work for large classes. Also upon the superior value of quantitative over qualitative work.

E. R. BOYER, Englewood High School.—Separate courses for college and non-college students are not practicable and a wide range of electives not wise. Pupils

should not be allowed too much election in sciences. A basis of required work in science should be fixed. The science course of the future will prove best for every pupil, whether he goes to college or not.

PROFESSOR CHARLES R. BARNES, University of Wisconsin, protested against differences between college preparation and preparation for life. Power to think is the thing desired for the college or business man or engineer—for everybody, in fact.

PROFESSOR DUTTON favored physiography in second year, because pupils in first-year classes are not able to do the work. Spoke of field work as being successful, but more so in favorable localities.

MR. MERRILL.—The earth and the child are both subjects in evolution, the understanding of which is one of the objects of scientific study. Field work should not be considered as an entertainment. Quantitative work is possible with it.

Graded lessons should be given, culminating in a topographic map. He thought it would be impossible to develop laboratory work, as given in Mr. Cornish's paper, unless physics should precede physiography.

O. C. CLARK, Salt Lake City, Utah.—I think energy is wasted by placing physiography early in the course. In Salt Lake we have it in the fourth year.

C. N. COBB, Albany, N. Y.—I think the course should be the same for all pupils and hold the variation in college requirements largely responsible for the variety of courses in secondary schools. Experience in New York colleges and schools shows the value of quantitative work over qualitative.

HERBERT C. WOOD, Central High School, Cleveland, O.—I am glad to know of the development of laboratory work in this subject, and to see that its possibilities have been so clearly demonstrated.

In Cleveland we have been working along this line for three years. Our experimental work, however, has been in a somewhat different direction.

Two problems presented themselves in the organization of the course in physical geography, *viz.*, to give, in connection with that subject, as much of the fundamental principles of physics and chemistry as was necessary for the intelligent interpretation of the natural phenomena involved; and, secondly, to prepare the student for individual work in the physical laboratory in the following year.

On the first point I would take issue with those who look upon physical geography as mainly an informational study, and, therefore, not capable of the exact treatment accorded to physics and chemistry. That physical geography may be treated as purely descriptive I admit, but the possibilities of the subject as a disciplinary one demand more. For this reason we have assigned physical geography to the second year of the high-school course, in order that the pupil, trained in observational work in the biological studies of the first year, having completed algebra, and being then in geometry, may bring to the class that mental maturity demanded by the more exact work of introductory physical and chemical experiments, and physical geography treated on a basis of natural laws.

"How?" and "Why?" are the two questions to which each observed phenomenon is ultimately reduced. To the end that these questions may be answered in every case intelligently, scientifically, the pupil must know something of physical land; but the experimental work must not be so divorced from the main topic, the earth, as to break the continuity of the subject.

To those unfamiliar with the possibilities of uniting these subjects, *viz.*, physics, chemistry, and physical geography, into a continuous fabric of science instruction, I would say that the results obtained in the three high schools of Cleveland have proven

that it is a thoroughly practicable and satisfactory undertaking. One scarcely realizes that he is studying physics, chemistry, or astronomy; on the contrary, he sees nature as a beautifully co-ordinated, articulated organism, working harmoniously.

Incidentally the pupil learns to approach the subject in the attitude of an investigator. He learns what an experiment means, what is vital and what is not, and becomes familiar with many of the processes, manipulations, and apparatus common to all branches of science; he is trained to record his work in permanent form in his notebook. The value of such training is evidenced in the attitude of the pupil toward the laboratory physics which follows.

PROFESSOR THEODORE NEUMANN, Lakeville, Conn.—The very point which has been brought out here this afternoon during the discussion by some of the speakers, namely, that it is necessary often to stop the progress of the class in physical geography in order to study some laws of physics, and thus enable the class to understand the following chapter of physical geography—I mention as an example the dew point, or the magnetic needle—has occupied my mind for several years, and, while the previous speakers have mentioned this deviation into the department of physics only, I think it happens just as often concerning chemistry, biology, mineralogy, etc. The question arises naturally: How far is the teacher of physical geography, assuming that this study is taken up the first year, and the pupils have had no previous training in science, allowed to take up physics, chemistry, biology during the course, and how can he avoid the danger of giving his pupils, not physical geography, but instead of it a “hash” composed of chapters from different departments of natural science? It seems to me that the only way to avoid this difficulty is to place physical geography, not at the beginning, but at the end of the science course, when pupils are by far better prepared to reap the benefits of the study.

PROFESSOR C. F. DUTTON, West High School, Cleveland, O.—I wish to indorse most heartily the opinion as regards the second year for physiography. The order of science subjects in our Cleveland high schools is zoölogy in the first year, physical geography in the second, physics in the third, and chemistry in the fourth. We find that the second-year pupils are sufficiently mature to grasp intelligently the work presented. Our schools provide a full year for the subject, and the teachers of physics confirm our belief that those pupils who have had physical geography are better prepared for the work of the third year than those who have not. The regret has been expressed here that it is so difficult for city pupils to do field work. I find in Cleveland that the facilities offered for rapid suburban transit by electric cars makes it possible for our city pupils to do as much and, perhaps, more field work than those in smaller places.

I feel that too much importance cannot be put upon field work thoroughly done. The laws learned in class-room must be applied in the outside world. I have seen a teacher of physics so far forget the laws of momentum as to attempt to alight from a moving car without allowing for his own motion, and a supposably well-educated student in physics hesitate to turn off an electric lamp. Is our work well done so long as our pupils fail to have taught them the connection between class-room law and out-in-the-world facts? Is this too much to expect of ourselves and our pupils? Will some one of more experience answer?

THE VALUE OF CHEMISTRY AS PART OF A SCHOOL OR COLLEGE COURSE.

BY ALEXANDER SMITH, THE UNIVERSITY OF CHICAGO.

I do not intend making a belated attempt to prove that chemistry is a valuable constituent of the high-school or college course. But the science, like every other subject of study, may be taught so as to be futile or even harmful, and it may not be out of place to consider the nature of the contribution which the study of chemistry may make to a sound education, and to point out the misuse which may be made of some of its most valuable features in selecting them for emphasis in an elementary presentation of the subject.

Whether we regard this science from the point of view of the usefulness of the knowledge or the value of the mental training which its study confers, it has the most indisputable claims to a place in the curriculum.

In a city like Milwaukee, with applications of chemical knowledge in operation all round us, the pre-eminent value of the information it furnishes cannot be gainsaid. If I pass over this aspect of the subject without further reference, it is because the tendency to emphasize the informational side is not seriously in need of re-enforcement.

The mental training which it is capable of yielding depends entirely on how it is taught. For chemistry the value in this point of view may more easily approach zero than for any other subject in the curriculum. If we compare the ordinary mode of teaching it in the laboratory with that used in the case of physics, for example, how much more clear and precise is the information we get from the phenomena of the latter science, and how much easier is the interpretation! We can trace the beam of light when it suffers reflection or refraction, and we can measure its intensity. We can easily accompany the study of heat by measurements of specific and latent heat. In electricity we can study the conditions under which a current arises, measure its quantity and electromotive force, and observe its effects.

In chemistry there is nothing easier for the student than to perform the experiments of the ordinary manual mechanically; there is nothing harder than to lead him to realize the meaning of the result. Thus, he burns phosphorus in oxygen. He observes the light and heat which accompany the phenomenon, and the white smoke which is produced. Perhaps he tests a little water, which has been shaken with the smoke, to show that it is acid. But all else is indefinite. He is told to take a piece

of phosphorus "half the size of a pea," and burn it in a "bottleful," which may mean anything from half a pint to a quart, of the gas. He does not handle the pentoxide produced, nor investigate its composition; nor does he study the formation of the phosphoric acid, nor its composition. Nine-tenths of what he learns from the experiment he gets from the teacher, or the book, if he gets it at all.

In laboratory manuals one hardly ever sees an experiment involving precipitation, where the soluble product is isolated and examined, or where the composition of either product is determined. Certainly, in ninety-nine experiments out of a hundred only a small fraction of the facts necessary for complete comprehension of the result is brought within range of the student's observation. He gets a hazy idea of the rest from the book, or, if he is a little further advanced, he makes a few wild guesses. The work is often so fragmentary and inconclusive that guessing seems to be the necessary sequel to each experiment. The result is to stultify the science in the estimation of the pupil, and directly to foster the very vices of vague speculation and unclear thought which it is the special boast of scientific study at first hand to uproot. For if there is one thing more than another which his laboratory work should do for the student, it is to convince him that guessing is absolutely excluded in scientific work. It should give him those habits of certainty and precision in reasoning that are a large part of the training which he may bring to the service of other studies, where the facts are necessarily second- or third-hand, and where vagueness is harder to avoid.

The immediate conclusion to which this leads is that we should do fewer experiments in the laboratory and do them more thoroughly. It is doubtless impossible to make a large proportion of the exercises quantitative. But at the beginning of the course a sufficient number must be worked out in detail, with study of every product and exact measurement of the quantities of materials used and produced, to form a substantial basis for reasoning where the work is less detailed. It is fruitless to expect any comprehension of the science, if we teach our pupils that the law of definite proportions is the fundamental law of chemistry, and that the science owes its modern development to the use of the balance, and then in the laboratory carefully illustrate all the other aspects of the science, omitting this.

Happily, several recent laboratory manuals have shown appreciation of the value of careful measurement, although the complete working-out of experiments, except in a few of the simplest cases, is still conspicuous by its absence.

One reason for the difficulty the pupil has in following the subtle progress of chemical change is that he gets little help from the imagination. The atomic theory is doubtless of great assistance in supplying a

mental picture of the progress of chemical change. But the difficulty is that, if this is introduced too early, it loses its proper place as a theory used to explain the facts of the science. It must come after the facts to be explained, not before them, otherwise the whole perspective is deranged. If carefully subordinated to the facts, it is of great pedagogic value.

This does not necessarily imply that symbols and formulæ must be postponed to an advanced stage of the course. The symbols may be used to represent the combining proportions of the elements, which are independent of the atomic theory, and can be introduced as soon as the measurement of these proportions has been illustrated. Every time an equation is given, however, the attention of the pupil must be drawn to the fact that it simply embodies the result of careful observation and exact measurement in an abbreviated form: that it is constructed at the very last, after the experimental work. If this view is not strenuously insisted on, the pupil, instead of viewing the facts of the science, themselves, face to face, sees only their reflection in a marvel-working mirror. In this view mysterious letters take the place of plain English and soon rivet all the attention, alphabet games are played under quasi-mathematical rules, bonds are counted and transferred, and "equation writing," instead of following experiment, usually precedes and occasionally supersedes it. The mechanical aids introduced to help the understanding of chemical facts actually take the place of the facts altogether in the estimation of the pupil.

How often have we all observed that a few symbols form almost the only surviving recollection of many, when they tell us about their school or college chemistry! Symbol-juggling is memorable in proportion to its uselessness; it endures when the facts of the science have all evaporated. Yet its disciplinary value is absolutely nil. The kind of training of permanent value which the science can give is as independent of such devices as the soul is of the garments.

I know no clearer and more concise statement of the arguments in favor of the study of chemistry than those formulated by the Royal Commission of 1861. Let me quote one sentence; it might form the text for a dozen addresses: "Science," said the Royal Commission, and every word applies to chemistry in particular, "quicken and cultivates directly the faculty of observation, which in very many persons lies dormant almost through life, the power of accurate and rapid generalization, and the mental habit of method and arrangement; it accustoms young persons to trace the sequence of cause and effect; it familiarizes them with a kind of reasoning which interests them, and which they can promptly comprehend; and it is perhaps the best corrective for that indolence which is the vice of half-awakened minds, and which shrinks from any exertion that is not, like an effort of memory, merely mechanical."

These benefits cannot be obtained, however, without much care and ingenuity on the part of the teacher. What an amount of labor is necessary to teach students to observe, for example! I use the word strictly in the Sherlock Holmes sense. They all see more or less well in proportion to the perfection of their optical apparatus. But not one student in a hundred is naturally an observer, and not one in a dozen observes even passably well. They have to be taught, and the strenuousness of the work which this involves for the teacher cannot be conceived by one who has no experience in laboratory teaching. I was told by one man, a teacher of classics, that all we had to do was to sit and read a novel while our students worked. The students have the same idea usually. They rush through the manipulations prescribed by the directions they have before them, and know no more about the subject when they are done than when they started. They are not to be blamed for this failing. They have previously studied subjects in which the material is all supplied in books. They have acquired the habit of taking all they see in print for gospel, and learning off by heart whatever they cannot understand. Some one else has always been responsible for the facts they have used and has influenced the conclusions they have drawn. The value of the study of science to those who do not make it a specialty—and they form the majority of our pupils—lies just here. They ought to learn how they may get the facts, not from books, but by their own investigation. Our task is, consequently, to induce them, by rigid personal questioning and by compelling them to take full notes, to notice all that happens and to draw rational conclusions. We have by main force to overcome “the indolence which,” in the words of the Royal Commission, “is the vice of half-awakened minds, and which shrinks from any exertion that is not, like an effort of memory, merely mechanical.”

Naturally, since this kind of teaching is largely individual, large classes cannot be handled by one man. I do not see how anything like satisfactory work can be attained with more than twenty students to each instructor. In The University of Chicago I have one assistant for every fourteen to fifteen students, during the first quarter of the course, and I am hard at work myself also during the whole period.

In every piece of work prescribed for the student the calling-out of his rational powers must be kept prominently in view, and everything that will give any excuse for mechanical work must be eliminated. After the study of the principles of the science and the chemistry of the non-metals and metals has been completed, work on the characteristics of the various elements and compounds whereby they may be recognized should be given. This will be followed by the identification of unknown substances or mixtures of substances—in other words, by analysis in a simple form. This is not only a most excellent review of the subject, but is also one of

the most efficient means of enabling the pupil to test the working of his reasoning powers and to exercise them still further. Yet there is here great danger that the work will become mechanical, and every effort must be made to prevent this. Still more must it be most vehemently emphasized that no temptations to mechanical work—as by the use of analytical tables—should be put in the student's way.

The use of mathematical formulæ in calculations, where, for example, Boyle's law is employed, is not intended to save the beginner the trouble of thinking, but to enable the advanced student to use the result in further conclusions involving more complex reasoning. A student should never be allowed to employ formulæ in working simple sums in the arithmetic of chemistry or of physics. He should reason out the method of procedure from his knowledge of the law every time he uses it. Any other course must cultivate mechanical work.

So with the exercises in analysis, even if the student first constructs his table as the result of his own work, if he is afterwards allowed to use the table to save himself the trouble of thinking, he will soon have forgotten why certain steps are taken, and later the reason why he does everything will be "because the table says so." The work up to the point when he has completed his table, if conscientiously done, is of value. After that, every time he looks at the table he loses an opportunity to use his own brain, and sinks himself deeper in the slough of indolence from which the teacher's efforts had already partially delivered him.

I was first taught analysis by a table and learned absolutely nothing. I had to start the whole subject afresh in the university, and only then discovered what rational work meant. In these remarks I have been considering only the relative pedagogical values of the two methods. It should be added that, if the student continues the study of chemistry, he finds the table of relatively little service in more complex analysis, and having used the table only increases his difficulties instead of diminishing them. So that he has been using something which was harmful at the time and has little ultimate value in any case. In real chemical analysis the plan of analysis must be designed for the special case in hand and devised on the basis of preliminary tests, so that the table has no place in scientific analysis and is pedagogically unsound in the school.

Since the identification of substances in the course in general chemistry is not intended as instruction in qualitative analysis, it is sufficient to suggest a simple outline of dry- and wet-way tests which will throw the burden of thought and rigid proof on the pupil. For the same reasons I would deprecate the introduction of formulæ, equations, and especially conceptions of molecules and atoms, at too early a stage. Something has been said about this subject already. But experience with

students whose preliminary training has been had in schools and colleges of all descriptions leads me to believe that this is no imaginary evil. I may, therefore, be pardoned for reverting to the subject. These are mechanical devices for helping more advanced thought, and are not intended to take the place of thought altogether. The student, whether in the school or the college, is eager to throw away his precious heritage of reason. He acts up to the schoolboy's definition of a man (he had been supposed to be studying zoölogy): "An animal which walks on two legs and has hair on the top of its head." The distinction which most of us consider as separating us from the higher apes, and of which we are so proud, is here left entirely out.

Equations and formulæ are the scaffolding of the science. Beginners persist in taking the scaffolding for the building; swallow the shell and throw away the kernel. We should draw the distinction between the scaffolding and the permanent part of the structure as clearly as possible, use the minimum of scaffolding, and not carry the building higher than can be done with this minimum of scaffolding. To drop the figure, our time will be better spent in giving the fundamental facts and principles of the science, and carefully exercising our students in the kind of reasoning for which our science supplies the best material, than in dwelling on the mere technical terminology of the subject.

We have fitted every study with such paraphernalia, and each subject has its own passwords and shibboleths. But we must remember that knowledge is a whole, and that, when we abstract a single aspect of the phenomena of the universe for a separate consideration and call it a subject of study, we do a certain violence to nature. And when we devise a terminology and provide the subject with a machinery of theories, we are removing it, in a sense, farther and farther from other related subjects. We must beware that we do not make the dry bones and machinery of our subject so prominent that they alone remain in the pupil's mind. This can only lead to the manufacture of prigs instead of scholars—people whose ideas and mode of expression are so specialized that they cannot make themselves intelligible to the ordinary understanding. Such treatment makes the subject dead rather than living, and renders it useful to the prospective chemist only, if, indeed, to anyone.

In conclusion, it should be admitted that other sciences supply approximately the same discipline as chemistry. It is not, therefore, necessary to include all the sciences in every school curriculum. If it were only information they could supply, then the more numerous the sciences were, the wider would be the range of this information. But the chief value of the study of science lies in the education of the judgment which it promotes and the rational habit of mind which it fosters. These things are better attained by a year's study of each science selected, than by cur-

sory glimpses of the whole circle of the sciences. We can gain some *information*, and even personally *verify* some of the *statements in the text-book*, in a term or less. We cannot change our habits of thought without an actual organic change in the brain substance, and more prolonged work in one line is necessary to make the change permanent and effective.

DISCUSSION.

PROFESSOR W. A. NOYES, Terre Haute, Ind.—High-school people have a right to expect that they be taught such facts as lie at the very foundation of life. With this in view when teaching chemistry, there is danger of converting our text-books into mere encyclopedias of detailed statement. The disciplinary element has been so strongly emphasized by all that we may be in danger of overrating its value, and to such an extent as to overlook the facts. So much attention has been directed to the *how* that we are in danger of neglecting the *what*. The object of discipline is to develop correct habits of thought. How shall we test the implied dogma lying behind theories presented to the mind? Scientific men are very suspicious of every theory not supported by experimental fact. Hence we should always strive to show the natural relations of fact and theory. Experiment serves a double purpose: Firstly, to develop information; and, secondly, to discipline in scientific method. The historical development of the laboratory in America shows that it was formerly, and mainly, used for the purpose of illustrating disjointed facts. Qualitative experiments were first selected because they were easily performed; but they gave only one side, and that a narrow one, and were liable to lose sight of the fundamental principles of the science. This has been recently modified by the introduction of the more scientific element, *viz.*, a considerable amount of quantitative work. A good, typical quantitative experiment is the following, which is fairly complex, and which leads the student to estimate the quantitative combining ratios of hydrogen, chlorine, silver, and zinc:

Firstly, a weighed quantity of pure metallic silver is dissolved in nitric acid; the silver is then precipitated by hydrochloric acid and weighed as silver chloride. Secondly, a measured quantity of hydrochloric acid is precipitated by an excess of silver nitrate and weighed as silver chloride. Thirdly, the same quantity of hydrochloric acid is decomposed by an excess of metallic zinc, and the hydrogen evolved is measured.

Some such experiments—and they may be greatly modified and extended—should be given. And, further, and very important, the student should reason out the relations of the problem.

In response to a question of Mr. O. C. Clark, of Salt Lake City, regarding the quality of chemical work done by high-school students, Professor Smith said that about ten in twenty-five were well prepared.

PROFESSOR KOHLENBERG, of the University of Wisconsin, spoke, deprecating the value of preparatory chemistry.

He was answered by Miss Fordice, of Iowa, who said the difficulty was that the colleges did not state what was wanted. The high schools are ready and able to do good work.

PROFESSOR FREER spoke, testifying to the good quality of the work recently done by the high schools.

PROFESSOR PALMER took the floor, emphasizing improvement in the preparatory chemistry.

ZOOLOGY IN THE HIGH-SCHOOL CURRICULUM.

BY HENRY BALDWIN WARD, UNIVERSITY OF NEBRASKA.

A long time has elapsed since Bacon gave to the world the sound advice that "we should accustom ourselves to things themselves." Little by little this idea has gained ground, until now it is recognized as a general principle in every grade of educational work and in widely separated departments of study that contact with concrete objects is far more inspiring and thought-producing than the mere scanning of black marks on a white page. So far as natural science is concerned, the varied training which it affords has been abundantly discussed before this association and elsewhere. To be sure, its practical value was for many years, unfortunately, the chief, or even the only, reason advanced for its importance from the educational standpoint. But of late attention has been directed to more fundamental considerations, prominent among which may be mentioned the interest always aroused and, consequently, developed by it along a "line of least resistance." It was reserved for the work of this Natural Science Department last year to furnish through the papers of two able educators specific demonstration of what many of us have felt for years, that natural science possesses a culture value in education as well as practical worth, and that, furthermore, its culture value is not a whit less important or less necessary than that of certain educational shibboleths. In fact, the educational world is just coming to believe what Louis Agassiz maintained more than twenty-five years ago: "A few weeks' training in natural science is the best preparation a man can have for work in any department of life."

The right of natural science to a place in the curriculum of our schools is still less open to question, since its introduction in various places has been productive of such favorable results. These have been attained in spite of many adverse circumstances: lack of knowledge on the part of the teachers of both the subject-matter and of the method of teaching it; lack of facilities in schools, and not only lack of sympathy, but even active and violent opposition in many cases, from the public. All this is rapidly passing away; natural science has won its place. But there still exist differences of opinion with reference to the time and, especially, with regard to the manner in which it shall be studied. It is my purpose to discuss these questions briefly, as far as they concern the relations of one branch of natural science to the curriculum of the high school.

The study of life represents, undoubtedly, the culmination of natural

science, taken in its widest sense, and yet the preliminary consideration of this subject may well come, if need be, in the first year of the high-school course. As the nature study of the grades has made the pupil familiar with the external form and habits of animals, particularly of those with which he is most frequently brought in contact, he is fitted to take up the study of their internal anatomy and the general discussion of their structure. Moreover, the subject does not necessarily involve previous training in other scientific branches. To be sure, no one of us would doubt that a preliminary study of chemistry and physics, to say nothing of other less closely related branches, would enable the student to appreciate better and more fully the facts which are presented to him in the world of life. But specific preparatory work is not essential to biological study, however advantageous it may be, and, on the other hand, the phenomena of life appeal to the opening mind in its untrained condition much more powerfully than do the more formal processes of reasoning involved in the physical and chemical sciences. In my opinion, while biological study should open the high-school course, it should also close it, and its highest aspect, the study of man himself, should be taken up in the senior year in the light of the studies already made in general biology, chemistry, and physics.

The phenomena of life are so similar, whether presented by plants or animals, and the work on the one subject is so clearly the complement of that on the other, that the really advantageous programme will either alternate the two or provide that the work in the one follows closely upon the completion of that in the other subject. If this be the case, the botanical work, on account of the somewhat greater simplicity and decidedly less mobility of plant structure, should precede the work in zoölogy.

The character of the work itself may now be subject to more careful analysis, and, while I shall consider simply work in zoölogy, yet, on account of the essential similarity among living things, there is much that, *mutatis mutandis*, may be applied equally to botanical work. There are a number of elements to be considered in planning a high-school course in zoölogy: the laboratory work, the field excursions, the text-book or lecture work; these should be supplemented by the formation of collections and by collateral reading. As laboratory work is the keystone of the modern scientific method, it naturally demands the major portion of the time; from three-fifths to four-fifths of the time at the disposal of the course should be spent in laboratory study. But it is not enough to devote to it this time; the work must be carefully planned and conducted along logical lines, if the results are to be obtained of the processes involved in the work. The first is observation of the object under consideration, the animal itself. This must needs be careful and critical,

and every effort should be made to lead the pupil to the analytical habit of thought. He must distinguish between what is actually observed and what is only an inference from the facts observed.

But the observation thus made does not become a possession of the student—is not available for further use—until it can be reproduced with accuracy. To this end a careful drawing constitutes a necessary part of the process. So-called “approximately correct” drawing is the usual result of a generally inaccurate observation. While the drawing of the object shows whether the observation has been correct, a further step is needed to fix that observation in the mind. It should be recorded in note form. This description will show at once what the student has judged to be important and what has been estimated of little value. These notes should be criticised more closely than any other part of the process. Here is a frequent cause of failure, I am sure, in the work of certain teachers; instead of cultivating the accuracy which they appreciate as necessary in mathematical training, they permit the description—which is merely a specific statement of the observation—to be made in such a loose and inexact fashion that the effect is really the reverse of that sought.

The fourth step in laboratory work is a comparison of the observation just made with other cases. Exercise of the analytical powers, merely, does not bring full development; through the comparison of the facts obtained from various sources the power of allowable scientific induction and generalization is also to be developed. This is a real point of danger in our emphasis of the laboratory method. It tends, perhaps, to teach destructive rather than constructive reasoning, and here I think that those who urge the introduction of a certain amount of systematic work into the laboratory training have strong grounds for their position. Entomology and conchology have already attained to a sufficient stage of development as sciences to furnish satisfactory material for comparative study, and, since they treat of objects easily preserved and plentifully obtained, their practical introduction is attended with little difficulty. They deal, moreover, with hard parts, capable of exact measurement and of description in precise terms, and not subject to great individual variation. This work is peculiarly fitted to attain the desired results as regards care, accuracy, and discrimination between essential and non-essential factors. Similar work forms an important factor in the natural-science study of the German *gymnasias*, and, so far as one can judge from its bearing on higher education, the results are most desirable. /

There are two conflicting methods in vogue as regards the scope of laboratory work in zoölogy. On the one hand, the student is to observe a little about a great many objects, a point here and a point there, until a large amount of ground has been covered, but the hard places have

been necessarily skipped, while accuracy and thoroughness have been sacrificed to "breadth" of training. Some one has very aptly said that it is the office of biology to educate rather than instruct. And the rapid method, which, to my mind, has much of the butterfly habit in it, fails to emphasize some very important results which may be obtained through laboratory work.

On the other hand, a more accurate study is made of a limited number of forms. Personally I am convinced that a series of typical forms, if studied thoroughly, carefully, and analytically, will yield those results in accuracy, in power of thought, and in independence of judgment which are the greatest pride of every successful science teacher. It is not necessary to study many forms, to cover a large amount of ground, even to take up a representative of every branch of the animal kingdom. The best of laboratory manuals attempt too much for the time ordinarily devoted to such a course. It is the quality of the work, not the quantity, that will yield the results sought after.

The choice of a laboratory guide needs to be made with great care, if a spirit of independence in the work is to be cultivated. Many teachers prefer to write outlines themselves, but the majority will no doubt be compelled to depend on the published manuals. The method employed in such a book is of vital importance, and there is grave danger lest the laboratory guide chosen be of such a character that the process of observation degenerates to a mere superficial verification of the facts worked out by the author of the manual. No matter how considerable the variations from the truth may actually be, I have rarely found a student who has failed to "verify" the "facts" as stated to him. The truly valuable laboratory guide employs the interrogation point more frequently than the period.

It is undoubtedly the pressure of overwork and lack of familiarity, on the part of the teachers themselves, with this side of the topic that have resulted in such limited use of the laboratory of nature. We walk through life with our eyes shut, and even students of biological problems are, with a measure of justice, charged with having become mere laboratory manipulators. The study of living things in their natural environment has been neglected, and here we may take another lesson from the German schools, in which field work constitutes a regular and prominent part of every course in natural science. As a matter of fact, field excursions are actually one of the most valuable and stimulating factors in biological training. Not that they may not easily degenerate into nothing more than a picnic and entirely fail of their desired end; but, if systematically carried out as a part of the regular work, recurring at specific intervals (with due regard to the weather), and so planned as to cover each time but a limited area of ground, and that thoroughly, they

become a powerful element in training the observation, and also furnish a never-failing source of interest for all who participate in them. To be successful, they must be carefully planned in advance, and should be aimed to give the pupils as thorough a survey as possible of the life of that region. How few there are who have any idea of their biological environment! All teachers will find in the Agassiz Association a source of assistance and inspiration for this work. From a hygienic point of view the introduction of field excursions should be strongly urged, and the æsthetic value of acquaintance with nature needs no emphasis. If the child is not brought into communion with nature, she will woo the heart of the man in vain.

As a text-book the old-time "natural history" had its undoubted advantages; its encyclopedic character, the large amount of information that could be acquired within a limited time—and forgotten even sooner, as some of us could bear witness—put it, in this respect, far ahead of any other means of instruction. But this advantage is more than outweighed by the fatal dependence upon authority and the study of that rather than the object. Of course, no one could hope to have a pupil acquire a satisfactory idea of general zoölogy by laboratory processes alone. Some information, especially concerning those inductions which we call biological principles, must be furnished second-hand. The great trouble is that most of the text-books at present available are merely books of reference, much like our old natural histories, and void of any mention of the biological side of the subject. Until there shall be greater emphasis placed upon the general biological aspect, many teachers will prefer to instruct by the lecture method, with its undoubted advantages, in spite of the difficulties which will always be met in dealing with younger pupils. The personal element imparted through a lecture is a constant source of inspiration to the classes.

In connection with the systematic work of the laboratory and with the field excursions, it will be natural for the student to gather a collection, and, if the tendency be well directed, it becomes a valuable factor in the education of the individual. Of course, a heterogeneous mass of stuff does neither the accumulator nor anyone else any good; but the same energy devoted to a limited group would yield valuable results and perhaps lay the foundation for a lifelong study of incalculable value to the student. Among other nations educated men have regularly each his scientific or literary diversion; here the tendency is rather towards more ephemeral amusements.

It is a single step from the individual collection of the student to that of the school itself. The school museum should be a working collection only, not merely a receptacle for curiosities. It is the comparative laboratory, and should contain nothing except what can be used and is

used. If properly arranged, and cared for, it will be an object of pride to the school; it will also excite a large fund of interest and be an inspiration to a much larger body than those directly connected with the work in natural science. The gradual contributions of successive classes will serve to build up a complete representation of the local fauna and to make it of value as a record of life in that region.

Finally, among these elements of a well-rounded course may be mentioned collateral reading. The acquirement of information in this way comes normally last of all. Taken at the right time, its value in broadening the horizon is not easily overestimated. It should be varied and, if possible, spontaneous on the part of the pupils, at least to the extent of their exercising a choice in the selection of reading from the works listed. I believe that a most valuable source of such reading is to be found in the travels of famous naturalists and in the records of those close students of nature whose works have attracted literary as well as scientific attention. No one can cross the ocean with Yacht Sunbeam, explore tropical forests with Agassiz or Wallace, or walk amid the quiet scenes of New England with Thoreau, without acquiring some of the power of observation which characterized these men, and cultivating at the same time a taste for good reading, which will tend to counteract the unhealthy appetite for trash so prevalent in the younger generation at present.

I cannot close without a word on one point. The ultimate results of any study depend very largely upon the teacher. All of us know that it was the teacher frequently more than the subject which yielded the best in our school life, and, necessary as mere knowledge may be, it can never compensate for lack of inspiration. What was it that made Louis Agassiz the greatest biological teacher of our country and our time? Not that he was a close observer—others have equaled him in this respect; nor yet that the fund of information at his command, that his wide training and personal contact with the great minds of the century in natural science, had given him intellectual resources beyond those of his associates. It was, rather, his boundless enthusiasm that recognized no obstacles, that knew the end secure before the beginning was made; it was the divine inspiration which has not only reflected itself in his own work, but has also been transmitted to scores and hundreds of those who have been his scholars and his scholars' scholars. I care not how well you know how to teach, how thoroughly you have at command all methods and theories, your success will be measured by your devotion, by the inspiration you can impart to others. As Faust says:

Grau, lieber Freund, ist alle Theorie,
Und grün des Lebens goldner Baum.

DISCUSSION.

E. R. BOYER, High School, Englewood, Ill.—I agree with Professor Ward that an elementary course in biology does not necessarily involve previous training in other scientific studies. I know from both experience and observation that a year's work or more in biology may be successfully accomplished during the first half of the high-school course. Every teacher of biology knows that in a more advanced course and in college the studies of physics and chemistry are prerequisites to biology, but I believe it to be both desirable and practicable to arrange an elementary course in biology which shall involve but few points in physics and chemistry, and that these may be included in the course and introduced as they are needed. The principles and laws of the so-called sciences are so intimately related and mutually dependent that the hard and fast lines which formerly separated them into distinct sciences are becoming obliterated. Is it not true that teachers in elementary and secondary schools are too much afraid of crossing the arbitrary boundaries of their immediate study and thereby frequently lose an opportunity of teaching a truth in its natural connection or of bringing into vital relation what would otherwise be disjointed and apparently unrelated facts?

To my mind the logical and natural order of the biological studies which were formerly placed on our high-school programme, regardless of sequence, is as follows: Botany, zoölogy, human physiology. In this arrangement the study of the structure of the higher animals naturally leads to that of the human body, and the elements of plant and animal physiology to the physiology of man.

Allow me to emphasize the importance of carefully executed sketches or drawings in connection with the laboratory work, and the very great importance of accurate written descriptions of the pupils' observations. It has been truly said that a scientific observation is never complete until it is accurately written out. Such a description should be orderly, clear, concise, and accurate, and is absolutely impossible without a diligent and careful study of the object itself. It is here that the pupil must make a sharp line between his actual observations and his inferences.

The teachers of biology in our secondary schools need a broader knowledge of the physical sciences in general and of modern biology in particular; furthermore, they need a clear and definite plan of work with the threefold aim of *culture, knowledge, and interest*—or, in other words, a training in scientific methods, the acquisition of scientific knowledge, and a true love of nature.

We need to avoid the unimportant details of structure and to emphasize the important ones and their significance. All lecture work and reading should follow the laboratory and field study, and should be based upon it.

DEPARTMENT OF SCHOOL ADMINISTRATION.

SECRETARY'S MINUTES.

FIRST SESSION.—THURSDAY, JULY 8.

The session was held in the chamber of the Milwaukee Board of School Directors, city hall, at 3 P. M., with Dr. H. L. Getz, of Marshalltown, Ia., the President of the department, in the chair.

After music by a quartette, the address of welcome was delivered by Hon. Charles Quarles, President of the city Board of School Directors. President Getz responded in behalf of the department. The opening address on "Hints on School Administration" was delivered by Dr. H. L. Getz, of Marshalltown, Ia.

A paper was given by J. W. Errant, member of the Board of Education, Chicago, Ill., upon "Reform in School Administration."

The paper was discussed by Mrs. Benj. F. Taylor, member of the Board of Education, Cleveland, O.

The second paper was given by Mrs. Alice Bradford Wiles, member of the Board of Education, Freeport, Ill., upon "Relation of the School Board to the People."

The paper was discussed by Samuel M. Foster, of Fort Wayne, Ind.; A. J. Lindemann, of Milwaukee, Wis.; Mrs. James Frake, of Chicago, Ill., and others.

The third paper was given by R. E. Sears, member of the Board of Education, Marshalltown, Ia., upon "The True Function of the Public School." The paper was discussed by Wm. S. Mack, of Aurora, Ill.; P. N. Siegler, of Dayton, O.; B. R. Vineyard, of St. Joseph, Mo., and others.

A Committee on Nominations was appointed, as follows :

John B. Jones, of Utica, N. Y.; Chas. E. Bair, of Oil City, Pa.; B. W. Wright, of Ishpeming, Mich.

The meeting then adjourned.

SECOND SESSION.—FRIDAY, JULY 9.

The Committee on Nominations submitted the following report :

For President, John E. Brandegee, Utica, N. Y.

For First Vice-President, Kenton Chickering, Oil City, Pa.

For Second Vice-President, Charles Quarles, Milwaukee, Wis.

For Secretary, Wm. Geo. Bruce, Milwaukee, Wis.

For Executive Committee—Wm. S. Mack, Aurora, Ill., Chairman; Mrs. B. F. Taylor, Cleveland, O.; Samuel M. Foster, Fort Wayne, Ind.; E. F. Bradt, Ishpeming, Mich.; Dr. R. C. Hanchett, Syracuse, N. Y.; J. W. Errant, Chicago, Ill.

The report was unanimously adopted, and the officers declared elected.

John E. Brandegee, of Utica, N. Y., offered the following resolution, which was adopted :

Resolved, That the Executive Committee report at the next annual meeting of this department a plan for organization and development of this department and for raising the necessary funds therefor.

Wm. S. Mack, of Aurora, Ill., offered the following resolution, which was adopted :

Resolved, That it is the opinion of the Department of School Administration that the appropriation of \$25 for the annual expenses of each department is wholly inadequate for the purpose, and should be increased to \$100.

Resolved, That the Secretary of this department be instructed to transmit this resolution to the chairman of the Executive Committee or other proper officers of the National Educational Association.

Wm. S. Mack moved that the chair appoint a committee of three, to report, at the next meeting of this department, a plan for securing uniform school reports, so that reliable comparisons may be made as to the cost per pupil for heating, for tuition, for incidental expenses, etc.

The motion was carried.

The chair appointed as such committee:

Wm. S. Mack, of Aurora, Ill.; P. N. Siegler, of Dayton, O., and John B. Jones, of Utica, N. Y.

President H. L. Getz suggested that the department hold its next year's sessions on the second and third days of the meeting of the National Educational Association, instead of the fourth and fifth days.

On motion, the time of meeting was left to the Executive Committee.

Wm. Geo. Bruce moved that it be the sense of the Department of School Administration to have the department represented in the Board of Trustees of the National Educational Association.

The motion was unanimously carried.

A paper prepared by T. H. Watkins, President of the Board of Education of Louisville, upon "Selection of School Boards—A Comparative Estimate of the General Methods now in Operation," was read by Robert J. Frick, of that city.

The paper was discussed by John E. Brandegge, of Utica, N. Y.; Mrs. Alice Bradford Wiles, of Freeport, Ill., and others.

A paper was given by A. H. Kirchner, architect for the school board of St. Louis, Mo., upon "Schoolhouse Construction—the Important Ends to be Attained in the Planning and Building of Schoolhouses."

The paper was discussed by Adrian Houtkamp, of Milwaukee, Wis.

The newly elected President was then introduced. A vote of thanks was extended to the retiring officers, whereupon the department adjourned *sine die*.

WILLIAM GEORGE BRUCE,
Secretary.

PAPERS AND DISCUSSIONS.

ADDRESS OF WELCOME.

BY HON. CHARLES QUARLES, PRESIDENT, BOARD OF SCHOOL DIRECTORS,
MILWAUKEE, WIS.

Mr. Chairman, Ladies and Gentlemen:

Wisconsin stands committed to the cause of popular education, not only by the policy adopted and pursued, but as a matter of duty arising from compact.

The ordinance of 1787, which organized the Northwest Territory,

gives at once the rule which binds us today and the reason therefor: "Religion, morality, and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged."

The moment that Wisconsin came into being as a separate territory it committed itself to this policy by legislation. One of the earliest acts of the territorial legislature of 1838 begins as follows:

"Every town in this territory containing not less than ten families shall be a school district and shall be provided with a competent school-master or mistress to instruct children."

The moment that the thirty-six square miles of forest, constituting a "township," acquired a population equal to fifty or thereabouts it became a school district, and the schoolmaster's reign began.

But neither compact nor legislation was needed as a spur to the noble men and women who in the later thirties and forties chose Wisconsin for a home. Out of their poverty they gave, that the men of today might have light. As they felled trees of which to build their cabins, they trimmed certain of the trunks and notched the logs for the construction of a rude schoolhouse. As they split the "shakes" which were to rattle over their own heads as sorry substitutes for shingles, they gave tithe from them for the roof of the cabin where education should be fostered.

The forest has given way to farms, hamlets, and cities, but the policy remains, and the impulse which our fathers gave continues, and, I trust, will be forever active.

Milwaukee from the beginning has carried forward this good work. No village or city in America has been more unanimous or consistent in continuously striving to advance the cause of popular education.

The population of our city is drawn from many sources and presents every variety of European nationality and all shades of religious belief. But all, whether Puritan, Catholic, freethinker, Yankee, German, Dutch, Pole, or Norseman, have labored together with this one common purpose. We have our squabbles among ourselves as to the means, but we all agree as to the end desired. And we realize that the best means to reach this end can be developed only by the attrition of controversy.

We in Wisconsin believe in popular education on the very grounds on which it has been so recently publicly condemned. We appreciate the fact that "education breeds ambition, and that ambition breeds discontent." But we recognize this other fact, that out of discontent comes improvement, and without it ensue degeneration and death; that men contented with themselves and their condition are beasts of burden only, and that progress and social evolution can come only from the struggle of the individual to ascend.

We welcome the kind of discontent caused by right education, and

expect from it nothing but good to society. Out of this can never come anarchy, for the revolution it may bring is evolution. The education contemplated by the sturdy and comparatively untrained framers of the ordinance of 1787 is that so carefully defined by Huxley, a century later, as "the instruction of the intellect in the laws of nature, including, not mere things and their forces, but men and their ways, and the fashioning of the affections and of the will into an earnest and loving desire to move in harmony with those laws." Thus the backwoods men felt what the philosopher has analyzed.

Out of such education can come nothing disadvantageous to the body politic; for, though institutions inconsistent with its purposes go down before it, "melioration of man's estate" must always follow.

But most of all we prize our public free schools, not alone for the education they offer to the poor man's child, but particularly for the breadth of the education which they give to the son of the rich man.

The daily contact on the playground and in the class-room teaches all that the differences in station are, so far as they are concerned, accidental; that caste does not exist; that there is no gulf fixed between the rich and the poor, but that each individual may appropriate to himself such place as he may be fitted to fill.

The continuous object-lesson is presented to the millionaire's son that his poor neighbor is not only of the same clay, but on precisely the same plane as himself—accidental conditions excepted—and to the poor boy that he may acquire for his children all the exceptional advantages enjoyed by his wealthy friend.

It seems that the only danger threatening our republic is the possibility that numbers of reasonable laboring men may conclude and feel that rigid lines of demarcation are drawn between the rich and poor; that a condition may come to exist, or be believed to exist, such as will render transfusion from class to class impossible, and such that the child born poor must always remain *prolétaire*. When that condition arrives, or is generally and sincerely believed to have arrived, the life of the Republic will not, in my judgment, be worth a year's purchase.

To prevent the development of such a condition and of such a belief, the strongest influence is the mingling of the children on a common level in the public schools. The child of the plutocrat will acquire from his ragged friend a certain robustness of thought and a sympathy for his fellows that will add immensely to his value as a citizen. And the poorest boy will learn for his lifetime that he and his petted playmate are members of one family, and that every American child is eligible to a position in any class; and the discontent engendered in his breast will prompt him to attempt his own elevation, rather than the degradation of those above him.

In the name of the Board of School Directors of the city of Milwaukee, I extend to you all the heartiest greeting, and bid you welcome.

HINTS ON SCHOOL ADMINISTRATION.

BY H. L. GETZ, MARSHALLTOWN, IA.

So far as years go, we, the Department of School Administration in the parent organization of the N. E. A., now nearly forty years old, are as yet among the "cradle goods." The infant is, however, a healthy one, and, if furnished with an abundance of diet, healthy and nutritious, of which an unlimited supply falls constantly, legally, and morally into the hands of all school-board members for disposition, this babe will soon stand upon strong and well-developed legs, with a physique and organization equal to any of its kin, and, let us hope, may develop and prove itself of such vast usefulness in the work it shall accomplish as will properly merit for itself the designation "giant of them all." To accomplish these ends much work needs to be done in the way of educating school boards and the general public. There should be elected or appointed, as members of school boards, only such men and married women as have an interest in the work, and who will devote their time and energy to the same. They should be educated so that they may, without presumption, regard themselves in the average the equals of superintendents and teachers. They should be successful in the management of their own business affairs; they should be honest, studious, and industrious; they should be just, sound thinkers and positive, and have at heart the interests of the schools, understand fully their objects, estimate carefully how, when, and where the same may be improved, and how much money may and should be expended in a judicious way to improve them, rather than to figure with a view of determining how little may be made to serve the purpose and still have a semblance to the ideal public or free schools. With all this, the taxpayers must be remembered and a thoughtful attention given to the school and district environment, so that a burdensome taxation may be avoided. An honest and conscientious man should place his qualifications in the balance, as it were, and before even accepting a candidacy, much more an election, as a member of a board of education, should determine as to whether he can come creditably near meeting the requirements necessary for the intelligent discharge of the duties of so important a position. Instead of the condition of affairs existing as just described, we have candidates often urged by politicians or others who have "axes to grind" and have not the slightest

interest in the welfare of the schools or the betterment of the juvenile element of their community. This class of men are apt to have hearts steeped in indifference, personal greed, and all else that is most undesirable in an American citizen. So long as the arguments find favor that superintendents and teachers should dictate to a board of education the needs and wants pertaining to the strictly educational features of the schools, thereby creating the idea that any stick or fossil will do to approve of, or ratify, such dictation, the people will not, cannot, be expected to insist upon the proper qualifications being possessed by the average school-board representative.

Personal experience and observation have led me to conclude that superintendents, in some instances, seemed to prefer the election on boards of education of men who were the weakest and the poorest in qualification for the position. To have perfect and satisfactory results, the most profound respect and confidence must prevail in the fitness and integrity of purpose, for furthering the welfare of the schools and the masses of the people, between the superintendent and the members of the board. The ideal board of education must possess a reasonable quantity and good quality of brain to enable it to think, reason, sift the chaff from the wheat, in everything that pertains to the education of the young ; that is, the environments in detail, hygienic and sanitary, educational and moral. Under the latter head I would include a broader scope than is usually intended by the use of the word ; I would suggest that a greater effort be made in the direction of teaching a more decided sense of duty, the rights of others, fairness, helpfulness, justice, courteousness. These things, not necessarily as a part of, or in the light of, religious teaching, but as the pure and simple duties individuals owe one to another, because they are just. I am sure that boards of education will find that, as special aids in developing these finer qualities and motives in individuals, the influences of music, the teaching of the beauty of flowers, and all else there is in nature and art that is perfect and ideal, are absolutely essential. These results will be most decided and perfect when the teaching is done by women, who, more than men, possess a keen and fine sense of the perfect, beautiful, and ideal ; are, therefore, better adapted than men to bring about in the schoolroom these most desirable impressions and results. Women should, therefore, not be displaced by the sterner sex, unless it be in the teaching of sciences, or in high-school principalships and superintendencies ; even here, in many instances, it is doubtful if men accomplish more than women.

Married women should not be employed in our public schools as teachers, except in emergencies, for reasons too numerous to mention here. The higher order of work in teaching should be given with a conscien-

tiousness to women who are brainy, refined, and consecrated to their life work, and have proven their interest and ability in the same.

Among the most difficult problems for many members of boards of education to solve is what constitutes so-called "fads." Among these may be enumerated bands and military organizations, physical culture, elocution, music, drawing, business course, including bookkeeping, stenography and typewriting; German, French, Greek, etc. Extraordinarily good reasons may be given why the first two should be regarded as fads and should find no place as a part of a public-school course; others have their objections and their advantages; some of them may, perhaps, in a measure, be regarded as fads in one locality, while they would certainly not be such in another; the general environment of locality at once being the changing or determining factor.

A problem of the greatest importance at the present time is that of "free text-books;" there are some features and arguments which have merit, there are more which do not. Taking the question as a whole, anything which tends to make the individual dependent and shiftless, instead of independent and thrifty, is wrong and pernicious. The latter condition may result through the furnishing of free text-books to individuals, the same having a decided tendency to develop the state of affairs last described, especially when done in a promiscuous way. If the plan were limited to those of tender years, not yet able by any manner of labor to earn the price of their schoolbooks, more might be said in favor of the scheme; even here it is doubtful whether there is justice or reason in taxing the people, especially those who have no children to send to school, to an extent and portion greater than they are subject to for the provision of bodily food and clothing. To conduct public schools it is practical to do so only by providing school buildings and teachers, thus making a place in and around which the children may be grouped, because these advantages could not in a practical way be provided for each individual separately. The argument set forth that, because buildings and teachers are provided and contemplated in the free-school system, and that, therefore, books also should be provided, is fallacious, because the books can be provided for by the individual pupil or parent, and the building and the teacher cannot be so provided. I am positive in the conviction that age and physical condition, possibly sex, in a degree should govern the furnishing of free text-books to pupils, that it should not and cannot be done in a general way, as now advocated, without being harmful in a way, as already suggested, and at the same time being unjust to the masses of the people. There are many other questions of importance which must be determined by you, and in which you have a duty to perform in setting aright the public mind so far as the advantage, value, or folly and pernicious results pertain to questions of the day. Every school board,

especially in independent districts, should have among its members a thoroughly competent and up-to-date practicing physician, whose duty should be to direct and supervise all sanitary and hygienic features pertaining to the schools. His word should be law, and, in the event of difference of opinion between such physician, members of the board, or patrons, an appeal should be taken before the state board of health, and to such board only, and its decision should be final. Lawyers, judges, and courts should have nothing to do with the determining of such questions. The foregoing suggestion should be provided for by law in every state in the Union. One more suggestion, and I have done. There should be a law in every state of the Union attaching a penalty in the way of fine and imprisonment at hard labor, or both, for any man or woman who fails to attend at least one state meeting and one national meeting of convention of school boards during a term of service, either elective or appointive. In a brief and condensed way I have brought to your notice these hints, making no attempt to discuss them in detail, but leaving them with you to think and dream over. I say dream, because, if you do not dream of these things, your mind in waking has never been sufficiently impressed with these questions which it becomes your duty to determine, to justify the public in placing confidence in you, as being qualified properly to discharge the duties imposed on you. I say again, think and dream of, sift and weigh, retain and cast away, in a conscientious and honest way, and the reward for your application and work will come to you in due time.

REFORM IN SCHOOL ADMINISTRATION.

BY J. W. ERRANT, BOARD OF EDUCATION, CHICAGO, ILL.

The problem of school organization is a most important question before the people today. From the colonial era to the present time the district school system, with some modifications, has been in vogue. In the centers of population something like an organized system of education has been evolved. To one who has studied the development of our public schools it is simply astonishing to ascertain how recently the position of superintendent of a city school system was created, and it must not be forgotten that when McAllister left Milwaukee and went to Philadelphia he was the first superintendent of that city's schools. But it is not the cities alone which have felt this need of organization in order that they might more perfectly accomplish the work for which they were intended. In the country districts the work of organ-

ization has been going on, and considerable effort has been made, largely voluntary, to obtain, through combination, results which cannot be reached in any other way. And so it comes to pass that the problem of the rural schools and their needs is the great central question around which the discussions of the convention have rallied.

Very few have any idea of the tremendous business interests which are involved in the maintenance of the school system of a great city. The Board of Education of the city of Chicago spends one-half of the taxes which are obtained from the people of that municipality. There are questions involving the purchase of land, the construction of buildings, their character and cost. There are questions concerning the purchase of fuel and the hundred and one articles which make up the supplies needed in the schools. Very few great corporations there are which, from a financial point of view, offer so many problems of management as does the maintenance of a great school system.

It is, however, exceedingly important that in studying and solving the problems of organization in connection with our school work we do not lose sight of factors which should be taken into consideration. It is a beautiful thing, for instance, to liken the forces connected with a great school system to a great army which has its general, its colonels, its captains, and its privates. It is a beautiful thing to conceive how such an army, thoroughly equipped and drilled, might move on with the perfection of machinery to the accomplishment of certain results; but let us consider for a moment what the purpose of an army is. It is an organized human force thrown against another organized human force for the purpose of crushing that other human force. The theory of it is that those lines and those regiments and those army corps are simply so much material to be thrown here or there, as the will of the commanding general shall dictate. But the modern idea of an army is already quite different. It was the brains behind the bayonets of the Germans in 1870-71 which conquered France. It was the training of the intellect and the heart which led those reserves at Gravelotte, after they had been repulsed time and again, to follow Moltke to victory. It was the education of Germany which had led each one to feel that he, individually, must save the fatherland. So that today, in the army of today, more is required than merely mechanical perfection.

But the great brotherhood and sisterhood of teachers working in the schools cannot be likened to any army. Theirs are not solely problems which can be worked out to perfection by the commanding general, in order that he may be able to achieve certain results. Each one in this army has a problem of his own to meet each day. These children they meet are individuals, living each in its own individual environment, each with its own heredity, each struggling under its peculiar conditions. The

mind of the teacher cannot take some patent plan which has been prepared somewhere by some one and apply it to all the children in the room as a whole. It is the province of the teacher, possessed of all the learning and resources which the most advanced methods can give him or her, with a training which makes it possible for the mind of the teacher to adapt itself to individual conditions — it is the province of the teacher with this equipment to study each individual case. It will be seen, therefore, that we cannot treat the problem of school organization on the same basis as we would treat the organization of an army. Rather am I impressed with the fact that the fundamental conception upon which is built the structure of the American republic is the one which will guide us correctly. The American republic is based upon the idea of the sovereignty of the individual citizen. Coupled with this idea, there must be offered to the individual citizen the highest opportunities for his development, in order that the citizen may be a well-equipped sovereign in administering the affairs of the commonwealth. It is this idea of the sovereignty of the individual citizen which makes the great democracy. But while we contend for the democratic principle, and believe that in it lies all the hope for the future, we cannot underestimate the need for the organization of the forces of the commonwealth. Certain results must be obtained by combination, and out of this grows government. Government becomes the hand and the mind through which the democracy accomplishes its purpose. Then again, government placed in a position where it can overlook the whole field, supplied with the resources and the qualifications for the studying-out of particular problems, can do certain work and give to the democracy its aid in its upward struggle. Applying the principle indicated to a school system, the teacher is the sovereign power, and the whole purpose and intent of the organization must be to aid the teacher in doing the best work.

The problem of the day in every direction is the harmonizing of the idea of organization and the idea of democracy. Democracy fears that perfect organization will lead to the centralization of power. The organized forces of government feel or see the failures of democracy, and believe, if the problem of progress was only left to them, they might accomplish much better results. Let us see how this harmony can be established in a great school system. Let the principal and teachers in each school constitute the faculty of that school. The city should then be divided into districts. The superintendent in charge of each district, the principal of the school in each district, and possibly a number of teachers, representing the body of teachers in each district, should constitute the faculty for such district. Then there should be a central faculty, consisting of the chief superintendent, the district superintendents, the heads of any special departments, a number of principals selected by

the principals from their own number, and a number of teachers selected by the teachers from their own number. All questions affecting educational work should be discussed in the school faculty, then in the district faculty, and, finally, in the central faculty. It would be well, also, to have the members of the board of education *ex-officio* members of the central faculty, in order that they might listen to the discussions and take part in them if they desired. This plan, it seems to me, would give scope to the individual, and would at the same time lead to a more perfect organization than any which exists at the present time. Each individual in the system would be a force in shaping the thought and policy of the whole. I have no sympathy with those who tell us that our teachers are mere machines, that the text-books must be large and elaborate, so that the teacher has everything prepared. I deny that the course of instruction must have perpendicular walls. I believe in giving opportunity, and I never yet saw the best results obtained by deprecating efforts. Even as you expect, so shall you receive. Belittle, and men fall. Demand the highest, and men will endeavor to come up to your expectations. Such a plan as is here presented dignifies the professional position of the teacher. He or she is not any longer a cog in the machine, but becomes a living force, whose voice is heard and whose thought may influence the entire system. At the present time systems are so organized that teachers seem to feel they must take their food from above. Under the proposed plan, those above would constantly feel the vitalizing influences of the great force throughout the whole. The teacher, in his or her work with the pupil, meets all the great questions, and should have a voice in determining the course of study, the books to be used, the materials to be employed, the method to be applied. I do not say that this should be a determining voice, but if it speaks the best, those who listen to it will be wise and give heed to the voice of practical experience. Such a scheme would also allow home rule, within limits, to schools and districts. It would take cognizance of the fact, for instance, that in a great city like Chicago all the schools in all parts of the city cannot be treated alike. We have schools which are situated in districts in which the children of foreign-born parents largely attend. We have other districts in which the schools are attended almost exclusively by the children of American-born parents. It will easily be seen that the work in certain lines will be radically different in the two districts. It also allows of breadth in various directions. I am one of those who believe that in a great city like Chicago, with its 250 schools, experiments should be carried on in this or that direction. If I were a superintendent, I would have various experiments going on in various schools. The principal should be in reality the head teacher and leader in the school, in touch

with the teachers and pupils, and helpful to them. The superintendents should be experts in the highest sense of the word.

Turning now from this picture of the reorganization of the educational system, let us for a moment consider the problem as it affects the board of education. The board idea can only continue to exist if it subserves its true function, *viz.*, to represent the people in the administration of the public-school system. It should reach the most perfect organization in the management of the various departments of the public-school work, but it should be careful always to keep the people in touch with what is being done. In other words, while the board of education should be the central power, which should have charge of affairs, it will be wise if it so arranges matters that the people will know what is going on, and will be led to feel that it is their voice and their action which affect the schools either one way or another. The board of education should be the body which discusses and manages the business affairs of the board. To the faculties, before mentioned, should be left the discussion of educational affairs. From the central faculty, with the concurrence of the general superintendent, should come the recommendations, as to educational matters, which the board is asked to approve or reject. The board should confine itself to the discussion and establishment of plans and policies. It should not interfere in the carrying out of details. These should be left to those who are employed in the various departments, because of their special fitness.

There are, however, many questions which are mixed questions of business and educational policy, and which remain for the board—the kindergarten, manual training, higher education, commercial high schools, the training of teachers. It is the business of a board of education to consider whether these should be taken up by the public-school authorities; how far they should be carried; whether the public money should be turned in such directions. When it has been determined to extend the work, or to enter into new fields, the experts are there to carry out the orders of the board on the proper lines. In this way the board of education becomes a small section of the great democracy. In its hands are placed the public moneys, and to its mind and heart are intrusted the care and the development of the public-school work. Such a conception as this dignifies the idea of a board of education. It makes it a body of men and women who must post themselves in regard to the tendencies and progress of school work, who must know the needs of the people and what they desire from the schools, and who also know in what way the people will derive most from the schools. In connection with the idea of keeping the people in touch with the schools, it may not be out of place to speak of a great movement which has been going on in Chicago during the past year. The school halls in various parts of the city have

been opened to joint meetings of the parents and the teachers in the schools. At such meetings practical questions have been discussed, and work done in the schools has been exhibited. These gatherings have been a great aid in informing the people as to what work was being done in the schools, and in shaping public opinion as to school matters.

DISCUSSION.

MRS. BENJ. F. TAYLOR, Board of Education, Cleveland, O.—This is not so much a discussion of the very able and interesting paper to which we have just listened, as it is a criticism of the practice existing in the city of Cleveland as regards the conduct of educational matters under what is familiarly known as the federal plan. It should hardly be necessary for me to premise that I use the word criticism in its better and proper sense—an examination intended to exhibit the merits and defects of the plan under consideration, which has hardly yet passed the stage of experiment.

The hope of a nation lies with and in its youth. To them must soon be intrusted questions of gravest import. The children in our public schools must meet and solve the moral problems of the age, and, hence, our first and highest responsibility to the state, to the home, and to posterity is bound up in the training of the children to whom will soon be confided the destinies of the Republic.

To make these children intelligent citizens, patriotic, loyal, and alive to their responsibilities, should be the aim of every individual connected with public-school work.

The administration of duties of such grave import should receive our constant and careful attention, and should enlist our best effort to give it the highest character and efficiency.

We need have little anxiety about determining what to teach; these are questions that the cultured and earnest teachers and authors are working out for us with certainty of ultimate success.

Our anxieties need hardly leave the field of school administration. When our schools cease to be in dangerous proximity to practical politics, when our teachers have the opportunity for and the dignity of reasonable independence, when only disinterested motives govern their selection and determine the course of study, text-books, and all the requirements of public instruction, then and then only may we rejoice in the assurance that the waters of the well spring of educational life are flowing free and unpolluted. But the price of this, like the price of liberty, is eternal vigilance.

In 1892 the legislature of the state of Ohio enacted a law giving to the city of Cleveland a new system of school administration, which, during the discussion incident to its adoption, was called the federal plan.

Under this plan the executive power is vested in a director, while the legislative power is intrusted to a council of seven members, and together they form the board of education.

The director and the council are elected upon the general ticket for a term of two years, that of three of the council expiring upon even years, and the remainder upon the odd years.

The council organizes annually by choosing one of its members as president, and upon alternate years elects a clerk; the latter being a salaried officer and not eligible to member-

ship in the council. The salary of the director is placed at \$5,000 a year, each member of the council receiving \$260 for the same time.

This is an outline of the machinery of the board of education. Let us consider its functions and how they are performed.

The director is expected to attend all the regular meetings of the board, and has the right to speak upon any question before the council, but has no vote, deciding or otherwise. He has, however, the power of limited veto of the acts of the council; that is, he may exercise the veto power only upon questions involving expenditure of money. The vote of two-thirds of all the members elected to the council is sufficient to pass any measure over the veto.

The director appoints the superintendent of instruction, subject to confirmation by the council, and may remove him, but is required to file with the council the reasons for such removal.

With the exception of the teaching force, who receive their appointments from and are assigned their positions by the superintendent, the director appoints and may remove at will all other employes in any way connected with the public schools. By this Cleveland plan all power heretofore vested in the board of education, except the purely legislative, is vested in and exercised by the director.

The council has the power to provide for the appointment of all necessary teachers and other employes, to prescribe their duties, and fix their compensation. The council must authorize all expenditures of money exceeding \$250 in a single sum, and all contracts made by the director must be subject to its approval. The council decides as to what studies shall be pursued, and what text-books shall be used. The regular work of the council is largely done through standing committees.

While I believe this plan to be an improvement upon the more general form of school boards, which are often unwieldy as to numbers and with an indefinite divisional line between legislative and executive functions, I cannot conscientiously say that this so-called "federal plan" has proven the ideal system predicted and promised by its authors.

It is not a pleasant task to indicate faults, or point out weaknesses, but I should be untrue to the responsibility placed upon me did I pass in silence the points in this system which, in my judgment, are weak, or which might, under certain circumstances, furnish opportunity for serious wrong.

The possession of unlimited power in any direction, the ability to control absolutely the pecuniary condition of a large number of people, involve a responsibility from which any man might well shrink; yet observation and experience teach us that the exercise of such power has a tendency to render almost any man despotic in disposition, selfish and grasping in practice. It has been said that a *wise* despotism is the best government in the world, but this adjective rarely qualifies that form of government in actual practice, and Americans are loath to subscribe to the statement.

In some directions, at least, this Cleveland plan does place unlimited power in the hands of one man, and to that extent it is, in my judgment, open to serious criticism.

The dominating position of the director is readily seen. While the superintendent appoints the teachers and assigns their positions, all other employes receive their appointments from the director, and may, by him, be removed at any time without cause and without appeal. Included in the lists of such appointments are the office force, architect, builders, inspectors, janitors, day laborers, down to the coal weighers and removers of ashes. The school council has not even the power of appointing its page. The director also appoints the board of school examiners. The director appoints the enumerators, yet, by the state law, the clerk of the board of education is alone responsible for their faithful performance of these duties, and any failure in that direction would entail pecuniary loss upon the clerk, and not upon the director who makes the appointments. With absolute

power to appoint and remove, at his discretion or caprice, hundreds of employ  s, the opportunity of building up a political machine, which, in skilled hands, might be used to seriously menace the liberty and stability of school affairs, is apparent.

While the superintendent cannot be removed without cause, his peace and comfort may be made to depend largely upon his doing the will of the man from whom he receives his appointment, and to whom alone he is, in a sense, responsible.

We are, all of us, probably more or less familiar with stories of amounts, modest, considerable, or extravagant, which syndicates of publishers are *said* to pay, or are willing to pay, for the adoption or retention of certain text-books, or of a course of study which should redound to their pecuniary interest. An alliance between a grasping political manager in the director's chair, if one should get there, and the wily representative of a great syndicate would afford ample opportunity for seriously injuring the schools.

Much of this wrong might be accomplished through outside agency, leaving the director to pose as a very correct, honest, economical, and even philanthropic servant of the "dear people," whose votes he may need at the next election.

An aider and abettor might be found in the council, or in one of the appointed officials, an astute politician, perhaps, paid from the public fund, whose time could be largely employed in laying plans to influence elections, and in the interest of the political party he represents, rather than in the interests of the schools and the people.

These opportunities for wrong-doing are greater in an office whose doors can be closed at any time for private conference, sealed hermetically if need be, than are offered by the old plan of boards of education in general control, where everything bad is likely to come out. Perhaps we have heard a good deal that is bad, because we have heard about all there is of it.

A director with conditions of service entirely independent of the council or legislative branch, and charged very fully and specifically with the executive branch of school administration, I believe to promise much improvement upon the more general form of educational boards, *provided* such an official's power over employ  s be sharply limited by a far-reaching system of civil service, or, to a reasonable degree, his acts subject to review by competent authority.

Since the director selects and appoints the superintendent of instruction, subject to the approval of the council, it would seem that he should not have the power to remove him without the consent of a majority of that body. This change would relieve the superintendent from any sense of obligation, by making him responsible to the school board, and to the people, rather than to one man.

Teachers also should be relieved from all anxiety, excepting such as pertains to the excellency of their work. I am inclined to question the wisdom of making the tenure of their office absolutely subject to the dictum of the superintendent. Possibly an associate committee, forming an advisory board, or court of appeal, to pass on questions of promotion, demotion, or dismissal, would be a wise provision, by relieving the superintendent of unnecessary responsibility, and at the same time protecting the teachers from the injustice of political influence. There exists nowhere in the world a class of workers more earnest and conscientious than the great body of cultured, progressive, devoted teachers engaged in public schools; nor, as a class, could any of the workers be less in need of methods of control which are deemed requisite for armies in the field, and to subject them to a single arbitrary, absolute authority seems little short of rank injustice.

Could all cities be as fortunate as the city of Cleveland has been during the past three years, in having a superintendent of instruction both wise and just, to whom teachers and people can turn with an abiding faith in his ability and integrity, there would be no need of these suggestions. But the history of public-school administration has proven

the imperative necessity for hedging round and guarding all avenues through which practical politics, with its demoralizing influence, can enter.

Thus, briefly and frankly, I have endeavored to show the points which I consider weak in this so-called federal plan. I make no charges, I indulge in no insinuations, I do not claim to tell you what it is; I am merely indicating what might be, if everyone connected with the administration of school affairs was not above reproach.

We love our children; the state is pledged to advance their interests; let us try for a system where a legislative power can only be exercised for good; for an executive power used only for what is right, living up to all its prerogatives, but never overstepping the limitations clearly laid out; above all, let us strive for an administration of school affairs that shall be forever divorced from practical politics.

RELATION OF THE SCHOOL BOARD TO THE PEOPLE.

BY MRS. ALICE BRADFORD WILES, BOARD OF EDUCATION, FREEPORT, ILL.

In addressing an audience representative of the school boards of the United States, one cannot but be impressed with the immeasurable influence of such a body, each member, either by right or wrong action, or, equally, by the neglect of known or unknown duty, determining the health, the knowledge, and the character of all the children in his home locality; the children who, in the near future, are to be the people omnipotent in our republic—a republic which holds aloft, as the hope and guiding star of all humanity, the torch of “liberty enlightening the world.”

That liberty may degenerate neither into license nor despotism is the problem of the American people. Educated citizens alone can solve it, and, consequently, the right administration of the common-school system is today our most important and fundamental duty. By the will of the people this duty is especially assigned to the school boards of cities, towns, and rural districts. That we are accountable to the people for an honest and economical expenditure of school funds and a wise adaptation of means to an end—the end always being the highest welfare of the child—is a familiar and indisputable truth.

Yet, who denies the statement made before this convention a year ago, that “to say that our schools, even in the most highly favored locality, are conducted wholly in the interest of the pupil is to challenge the intelligence and the honesty of every close observer”? Cannot each of us, from his own experience, corroborate the statement issuing from the National Bureau of Education that, “until recently, evidences of any general interest in the management of the schools were hard to find”? Why this discrepancy between theory and practice? Why this willingness to laud education; to idealize the little red schoolhouse, and this

unwillingness to study principles and methods by which alone education can be made a vitalizing force? Indifference on the part of our so-called best citizens alone accounts for the general ignorance and apathy prevailing toward school conditions and possibilities. Let us study how to lessen this strange indifference.

"The common problem, yours, mine, everyone's,
Is not to fancy what were fair in life,
Provided it could be, but finding, first,
What may be, then find how to make it fair
Up to our means; a very different thing."

In all our efforts to promote growth (and growth or decay is the law of life) we must ever remember the words of Lincoln, "With public sentiment on its side everything succeeds, with public sentiment against it nothing succeeds;" but if we interpret this to mean that we should follow public sentiment as we guess it to be, we shall fail greatly and lamentably in our right relation, as I conceive it, toward the people. It is our imperative duty to form, lead, and guide public sentiment. There is no progress without leadership. However skeptical we may be as to our capabilities for leadership, if we have accepted school-board membership, we have already assumed this responsibility, and we must discharge it conscientiously and courageously, though it may be humbly and self-distrustfully. In the economy of our civic life we can find this responsibility nowhere but in the school board. It is surely not in the churches, for, with the exception of two denominations, they pay more active, financial, and personal attention to foreign missions than to the schools. It is easy for school-board members to say it rests with superintendent and teachers, but this is a mere juggling with words, an idle, though plausible, shifting of responsibility, which no thoughtful man will consider just. Superintendent and teaching force may and should be our most forceful and valuable ally; but the board selects this force. The board is supposed to guarantee its knowledge and character, and this certification alone gives any peculiar influence or value to its expression of opinion. Could school-board members realize that they are logically and inevitably leaders of public sentiment, then would begin steady, thoughtful voting and talking up to the level of individual conviction, instead of down to the level of what is conjectured to be the wish of the people.

Many of the weaknesses of our school administration result from a timid and too great subservience to what is conceived to be public opinion, but which is often only the noisy and officious blustering of people who have an ax to grind, or the superficial and prejudiced talk of those who never visit schools, who never think of, much less study, educational problems. The man who really respects the American people will dare every time to rely on their sense of truth and righteousness. There is a

deep, though it may be a silent, undercurrent of earnest devotion to childhood, an appreciation of education as the child's dearest birthright, and as the only safeguard of a republic, to which we may with safety appeal in every community. It may not bear us on to re-election, but that is a consideration beneath us—very trivial compared with the welfare of one child—and, whether on or off the board, we may and should continue to guide this current onward in a right direction. A wonderful revolution would at once result if in every school-board session each member would make his rule: "What I must do is all that concerns me, not what the people think." This rule, equally arduous in actual and in intellectual life, may serve for the whole distinction between greatness and meanness. It is the harder because you will always find those who think they know what is your duty better than you know it. But tact of expression must ever go hand in hand with courage of conviction; independence of action on the board with respectful attention to, and courteous patience with, the views of our neighbors and fellow-citizens. We must take time and trouble to convince them that the sole aim of argument and vote is the good of the child.

If the welfare of the child is not our supreme guide, then are we false to duty, both as agent of the taxpayer and guardian of the pupil. Yet how many and how frequent are the arguments, appealing often to good in human nature, that would lead one to suppose the schools a great charitable institution for the support of well-meaning, but otherwise helpless teachers! No matter how eminent her qualifications, how great and loving her sympathy with children, how successful her experience, no married woman must be appointed as teacher, because her husband should support her; no rich man's daughter, because a poor man's daughter must be taken care of; no two members of the same family, because that family thus receives more than its share of public money, and, above all, no non-resident, for local taxes must be expended for support of local people, just as the poor funds are. No incompetent teacher must be dismissed, so long as she daily presents herself at her post and manages to half keep mind-deadening, traditional order in her schoolroom, though she may have grown deaf and even feeble-minded in the service, provided only she is a "home teacher," and has friends in the community. And who that draws a salary has not friends? President Draper, when superintendent of the Cleveland schools, most truthfully said: "Yet no teacher was ever so deficient or unable to control pupils, so lacking in energy, so given over to favoritism or prejudice, so disagreeable to associates, so resentful of suggestions, as to prevent any number of people of good standing and of the best intentions from exerting their influence to secure a reversal of the action of the superintendent in removing her. The people who do this are not all of the class styled

'politicians.' Others who would resent such a classification, and who have no better cause, are no less urgent and persistent in their importunities." Sympathy and protection for the teacher are here, and they are good things in their right place. But where are sympathy and protection for the child, and not only for the one child, but for the forty, fifty, or sixty who must suffer in payment for the deficiencies of the one teacher? Forty against one, and the forty helpless, impressionable, with their whole futures to be made or marred by our action! There is no room for hesitation. There is no question on which side justice, sympathy, and love must tip the scale. But having thrown a vote on the right side, let the people know the reason for it, the principles by which we are governed. Allow no suspicion of personal favoritism to taint our action, nor of political, religious, business, or social bias. That not a doubt of disinterested motives may, in the mind of even one person, shadow the action of the school board, the old New York board had a rule, and it has also recently been adopted in Kansas City, that no relative of a member of a board should be appointed to any position in the schools.

Rules governing qualifications of new teachers and requiring professional training should be adopted by every board, with a proviso that they may only be suspended when the supply does not equal the demand. Neither should we rest satisfied with rules which may be rescinded at the next change in the membership of the board, but we should use our influence in every way possible to secure a public opinion which will enact state legislation making requirement of professional training obligatory. That this is quite possible is proved by the New York law, which went into effect throughout that state last January.

We should know something, comparatively, of the school legislation of our sister states, not only that we may urge what is good upon our own legislatures, but that we may oppose what is bad. If there are as many politicians upon our boards as is constantly declared, our united influence, located, as it is, in every city of the state, could easily secure the desirable legislation which teachers' associations annually urge.

Here the question naturally arises: Should the membership of politicians upon boards of education be forbidden, as under the new Milwaukee law, which makes ineligible for appointment any officer of any political organization, or holder of any public office of profit other than judicial? By all means, if public office is regarded as a "private snap," or if men are in office for the spoils, or nominated by a corrupt machine, or appointed because of a "pull." But if men are chosen to office because of their fitness, and accept from a high sense of public duty, then their co-operation should be eagerly welcomed in every field of public endeavor. Yet the law may be wise from the point of view that the duties of a school director demand all his leisure. "Concentration is the secret strength

in politics, in war, in trade, in short, in all management of human affairs." So let us concentrate our attention and our endeavor upon educational advancement. We might achieve the ideal of Channing: "A body of cultivated men, devoted, with their whole hearts, to the improvement of education, and to the most effectual training of the young, would work a fundamental revolution in society." That a revolution is needed there are many indications. President Gilman of Johns Hopkins tells us that "American education is still far behindhand," and that "comparing American youth with those of foreign countries, the most competent judges are of the opinion that the Americans have lost two or three years of time in their educational careers." Leading educators and intelligent observers from San Francisco to Philadelphia tell us that about 25 per cent. of the teaching force is incompetent. This disgrace is not to the teachers, for there is nothing shameful in mistaking one's vocation, but first to the superintendents, who are either too ignorant or too cowardly to recommend and insist upon their dismissal, and, second, to the school boards, which should know and abhor this condition of things, and, first securing a superintendent with ability and backbone equal to the task, should co-operate with him, not only in securing good teaching, but in banishing all bad teaching from the schoolroom.

Paramount as is good teaching, the health of the pupils is of even greater moment. Yet many schoolhouses are built in total disregard of sanitary laws, and very many in daily use are unfit for occupancy. Boards of health have officially condemned many. In numerous second- and third-class cities it can be truthfully said that not a single room is ventilated, and statistics prove all over the country that we are ruining the eyes of our pupils by insufficient or improperly directed light. We are told by competent authorities that we are making our school children "near-sighted, deaf, crooked, and hysterical." For this school boards are directly responsible. We grow weary of reiterating the never-questioned fact that school boards should secure for the children scientifically adjusted seats and desks, sufficient and properly directed light, adequate ventilation, equable temperature, safe disposal of sewage, pure drinking water, and cleanly, attractive surroundings. Verily, of school boards as of individuals, we may say: "No matter how much faculty of idle seeing a man has, the step from knowing to doing is rarely taken. 'Tis a step out of a chalk circle of imbecility into fruitfulness." A fruitfulness which, in the case of sanitary reforms in schoolhouses, means health and strength to the children, to our future citizens. Without health there is no power, no joy; yet daily, yearly, by our negligence we take some part of this precious heritage from our children. We plead, perhaps, ignorance, when it is our moral and legal duty to know (the state law of Illinois requires every school-board member to visit every school once a month), or, if

cognizant of the conditions, we dodge behind the taxpayer, saying that he will not stand the large expense necessary for hygienic reforms. Try him and see. But do not be satisfied with the vote which orders reforms. The evil results of bad conditions, and the immense gain in health and mental capacity due to proper conditions, must be explained and made clear. Opposition, if it exists, is due either to ignorance or misunderstanding. Let us trust the people, take them into our confidence, teach them what we are trying to do, and, above all, let us not be discouraged nor give up the fight at the first nor at the last defeat. Remember the words of Confucius: "Our chief glory is not in never falling, but in rising every time we fall." Let us make sure we are right, then be equally confident the right will in time prevail. But in a republic it must prevail through the multitude. Therefore school boards must add to their many duties that of arousing, educating, and directing public opinion. Perhaps it is to give us time for this that superintendents purpose to relieve us of our duties in regard to appointment, promotion, and dismissal of teachers, choice of text-books, and determination of course of study. If a right-minded board has the inestimable blessing of a conscientious, able, progressive, courageous superintendent, it will most gladly follow his recommendations, and bear with him the brunt of the opposition which will inevitably arise from disappointed applicants and their friends, whenever and wherever teachers and janitors are employed according to merit alone. The board, if not right-minded, will easily find a superintendent of its own character, through whom to work its ends. Much time and energy are wasted in attempting to secure the best organization before public opinion is created, which alone can enforce its proper working. Everyone knows that the worst system has had admirable results, when the best men were at the head of it, and that the finest system is entirely powerless for good if administered by corrupt or selfish time servers. It is a curious fact that in a correspondence which the writer had three years ago with highly educated persons unofficially interested in the public schools in twenty different cities, it was reported from every city where the board was elected that things would be much better if it were appointed by the mayor, and, wherever the board was appointed, that a great reform would be accomplished if it were elected. Thus we go on striking at a branch here and there, leaving the root untouched. The whole matter was tersely and bravely put by a writer on the *Higher Life*, of Philadelphia, who said: "The schools are low in standard, and, what is worse, they satisfy the great mass." It is this self-satisfaction which we must break up; this Fourth of July oratory on the glories of the public school, accompanied by almost total ignorance of its real glory and too often real disgrace. A London writer comments on an article which gives the testimony on teachers themselves as to the unworthy motives fre-

quently controlling their appointment and dismissal, as follows: "I am quite safe in saying that the sort of thing disclosed in the *Atlantic Monthly* for March by Mr. G. Stanley Hall would stagger the most unscrupulous among us."

In thus dwelling on the dark side of the shield, I am well aware that I am laying myself open to the charge of pessimism and of lack of appreciation of the many good points in our schools and of our multitude of noble teachers, but one cannot present all sides of so complicated a subject in a short paper. I am willing to leave to others the pleasanter task of lauding the schools, while we members of school boards diagnose their diseases, that we may apply proper remedies. It is right to praise high and lofty devotion to duty, but no less an obligation to condemn openly and in no uncertain terms all unworthy performance. "To have high ideals and to know good work lays a heavy burden on one who would like to approve what he sees is defective, and to praise what he knows is inferior." Only by honest expression of individual opinion, based upon knowledge and experience, is correct public opinion formed. The more widely such views are disseminated in public meetings and through the press, the more quickly will the multitude take them up. Hence the great value and extreme importance of all organizations which bring together parents and teachers, taxpayers and others interested in education. There should be a public education society in every community. If there is none in our home city, we could do nothing better than to obtain the signature of every member of the board of education, and of ex-members, to a call for a public meeting to organize one. Its purpose should be to know the schools as thoroughly as is known the condition of the streets, or the efficiency of the police and fire departments. Only it should go much farther, and very seriously and carefully, inasmuch as the education of the young should be our prime solicitude, demanding our best energies and most heroic sacrifices, transcending, as it does, in importance every other civilizing and uplifting agency in the community. Among the members of such a society many could occasionally visit schools in other cities, and, reporting back, thus establish a basis of comparison, for lack of which many schools lag far behind, the local press often mistakenly asserting that they are second to none. An educational society, when grown large and influential, would furnish the best possible means for nominating a non-partisan ticket for the school election, men and women whose education, courage, and sagacity and integrity would make them fit leaders of the people in school affairs.

The members of such societies should be encouraged to visit schools by the knowledge that correct pedagogy is only common sense applied to teaching—even at the risk of discovering that common sense is hard to find in the schoolroom. Far better mistakes and clashings of opinion than

the present general ignorance and apathy! But are school boards ready to turn the search light of alert and intelligent public interest on the schools? Ah, there's the rub in many a community! Yet I am convinced that no permanent reform can come except through actively and personally interesting large numbers of intelligent men and women in the schools.

The magnificent school systems of Paris and Berlin, with their varied and successful ramifications fitting for all trades and professions of life, have, in addition to their governing bodies, several thousand reputable citizens intimately and responsibly connected with them, through local boards of inspection and co-operation. The whole country will watch with great interest and hope New York's experiment under its new charter, by which the mayor appoints school inspectors in each district, who are to report quarterly, recommending what seems best to them, including dismissal of teachers, but having no voice in the election of the latter.

In drawing this paper to a close, it is unnecessary to say that many important phases of the relation of a school board to the people have been untouched. I have simply tried to emphasize what seems to me most fundamental. I cannot close, however, without brief reference to several other points.

There is greater danger that boards of education, in giving proper power to superintendents, will fail to hold them adequately responsible for results. Here is the weak point, if any, in the so-called "Cleveland plan." If boards cannot judge of the qualifications of teachers, how are they to judge whether the superintendent appoints, promotes, and dismisses on merit alone, and whether he is himself a capable and inspiring leader of teachers? If boards know nothing of text-books and courses of study, how can they judge whether the superintendent chooses wisely? The fact is, the board (or at least some of the members) must know something of all these things, or fail in its duty. Otherwise it is at the mercy of a superintendent, who may work simply to please parents and teachers, and, succeeding in that, may draw his salary year after year, and the schools grow poorer and poorer, with no one to say him "nay." The comparison often made between a superintendent as the agent of a board of education and a business manager as agent of the board of directors of a corporation is weak in this that the success of the latter can be measured accurately and beyond question in dollars and cents, while the success of a school superintendent is in developing all the inherent powers of a child, and grounding him in mental and moral character. There is no measure of such success or failure—no hard and fast test.

The board of education cannot sit back in its office chairs and read this off from scholarship averages, examination marks, and number of promotions.

The frequent refusal, without sufficient reason, of our best men and women to serve upon school boards, or, having served one term, to run for re-election, gives opportunity to the intriguing, the corrupt, and the incompetent. Shaw tells us that no man in Berlin would dream of refusing. Shall we, the citizens of the leading republic of the world and of all ages, show less civic patriotism? One more point, and I conclude.

How idle to talk of character building as the aim of our public schools, and to inculcate maxims of truthfulness and honesty, and then year by year, as is often done, graduate classes of boys and girls who have not honestly earned their diplomas, who have not completed the course of study which the diplomas say they have! Do boys and girls not know truth from falsehood and the difference between precept and practice? In how many high schools are the athletic contests with neighboring schools fairly conducted? Must we not blush with shame that our boys and girls in their teens are allowed to think it fine, and even to receive our applause for winning under false pretenses by taking into their so-called high-school teams young men having no affiliation with the high schools? It is our business to see that these contests are fair and above-board in letter and spirit. Their aim should be, and, rightfully conducted, their result will be, to encourage and promote manliness. There is no manliness without perfect truth. This is no slight matter. Remember that Lecky says: "In the long run the increasing or diminishing importance of character in public life is perhaps the best test of the progress or decline of nations." As the child is father of the man, so is the school father of the citizen. We cannot have civic righteousness until we have it in our schools. Therefore, "provide out of all the people able men, such as fear God, men of truth, hating covetousness, and place such over them." Then will the schools give such a wise and well-rounded education, physical, mental, and moral, that our children, grown to man's estate, may be trusted to cherish this republic and transmit it undiminished in goodness, power, and glory to their descendants.

DISCUSSION.

SAMUEL M. FOSTER, Ft. Wayne, Ind.—School trustees hold a most important trust, and no person should accept the position of school trustee without a strong sense of knowledge that a great responsibility had been placed upon him.

A board of education performs a dual function: it must deal with the people and also with the teachers. Members of boards of education must have a knowledge superior to that of the average man or woman. Boards of education have the duty imposed upon them of protecting the public from the public. In these days of great invention, where ideas run wild, it is the duty of boards to protect the people against the so-called fadist,

and should not put into practice the schemes concocted by men and women who are experimenting with the children of the land. Boards of education should be progressive, but not too progressive. Regarding the relation of boards to the teachers, they should stand by them as a man stands by his political party.

H. S. HARRISON, Chicago, Ill.—Members of boards of education should stand closer by the teachers than men stand by their political parties.

MRS. I. S. BLACKWEATHER, Chicago, Ill.—The President, in his opening address, advocated the non-employment of married women as teachers. Do not the sacred duties of motherhood help to make the ideal school-teacher? I believe that a married woman teacher is better fitted and qualified for the teaching profession than the new high-school graduate.

PRESIDENT H. L. GETZ.—I say: "Positively no." Married women have the duties and affairs of the home allotted to their care and management, and cannot afford to be tied up with duties, eight to ten months in the year, which require such close attention as teaching in the public schools necessitates. All married women physically and mentally competent to teach school should be expected, in fact are as liable, to become mothers as any other class of unmarried women enjoying good health. Therefore, they are not desirable in the schools. The proper place for a married woman is on the board of education, but not in the schoolroom as a teacher.

A. J. LINDEMANN, ex-President Milwaukee School Board, in a forcible manner championed the proposition of employing married women teachers. He held that it is not the business of the board of education to inquire whether a woman teacher is married or not. The board should work for the welfare of the pupils, and should furnish them with the very best teachers. The question of charity, which is sometimes raised in favor of the employment of unmarried teachers, should not be considered. In answer to the objection of the physical condition of married women, he said there were more nervous teachers among those not married than those that were married, and asked: "Is it a crime to marry?" The President says they make good school-board members, and it is true, such being the case, they also must make good school-teachers.

SAMUEL M. FOSTER, Ft. Wayne, Ind.—It is the duty of the board of education to give to the community the best school efficiency that can possibly be given. There are superintendents in the employ of some boards who allow their teachers to work year in and year out, doing the same thing day after day, making no progress whatsoever. He suggested that it would be money well invested if boards employed superintendents who would make teachers progressive in their daily duties.

THE TRUE FUNCTION OF THE PUBLIC SCHOOL.

BY R. E. SEARS, BOARD OF EDUCATION, MARSHALLTOWN, IA.

That "all men are born free and equal," that this is "a government of the people," and that "we must educate, we must educate," are propositions equally accepted by the people and equally dear to their hearts. To limit or qualify either is, in the view of many, akin to treason. In consequence, nearly everything advanced in their name has received ready

acceptance. Under the spell of the educational sentiment, colleges and universities, seminaries and academies, have become legion upon legion. The state of Ohio alone is said to have forty-seven colleges within her borders, and Iowa thirty-six. The schoolmaster has, indeed, been abroad in the land.

Our public-school system has been expanded, until the world certainly never before saw the like. We glory in our system for the general diffusion of knowledge, and glorify our public schools as the bright particular stars of that system. Neither money nor time nor self-sacrifice has been spared in promoting their interests. Each has been given cheerfully, patriotically, as a matter of course, often without much consideration on the part of its donors. In the name of education the heavy burdens of the present have been supplemented with heavy mortgages on the future. Our issues of bonds have resembled the efforts of the giants of old in piling Pelion on Ossa, and both on Olympus.

Something over a year ago the writer of this paper had occasion to examine the financial condition of a certain school district, having a population of about 10,000. For some time there had been a singular desire of its inhabitants to sell real estate therein and an equal singular inability so to do. He found the district bonded for every dollar the law permitted, and in addition a floating indebtedness of one-fifth more, and that there was a tax levy for that year of eighty mills on the dollar, of which over forty mills were for school purposes. An investigation of the schools, from the kindergarten to graduation, showed that the course was scientifically arranged, according to the most modern and approved methods, and required thirteen years for its completion. The high-school course was four years, and included in its curriculum Latin and German, English and American literature, physiology, zoölogy, botany, chemistry, geology, astronomy, plane geometry, solid and spherical geometry, physics, economics, modern and ancient history, commercial law, commercial geography, commercial arithmetic, stenography for three years, typewriting, bookkeeping, music, drawing, and physical culture. In addition to all these, one influential member of the school board expressed himself in favor of adding telegraphy and pharmacy in case a class of reasonable numbers could be secured. One of the admirers of the school, in a local paper, stated that when Daniel Webster graduated from Dartmouth College he did not have so good an education as could now be obtained in that high school, and that not half the colleges and universities of the state could boast of such a chemical, bacteriological, and microscopical equipment.

There was no evidence of misapplication of the funds of the district. The money raised by taxes and bonds had been expended on the schools. A continuation of that policy would not merely "dull the edge of hus-

bandry," but meant municipal bankruptcy and practical confiscation of individual property. That led the writer to a consideration of "What is the True Function of the Public School?"

Is it intended as a substitute for the college and university, or as preparatory to them, or as a school unto itself for the preparation of its pupils for the actual work of life? Is it for the few or many? Is it for the purpose of learning a few elementary things well or many things superficially?

The writer is a firm believer in the higher education, as also in the ethical and physical, as well as mental, development or training of the common education. He, however, believes it is economic waste for every country town of five to fifteen thousand inhabitants to attempt to maintain a little college of its own, ruinous to the taxpayers, detrimental to the high schools of learning, and of little benefit to the pupils. It is economic waste, because much more and better instruction of the higher branches can be obtained in the institutions of higher learning at very much less cost. It is ruinous to the taxpayer, because the increment left from the income of property is out of all proportion to the taxes paid. It is detrimental to the higher institutions, because it deprives them of that much patronage, which, by large investments, they are prepared to serve. It is of little benefit to the pupil, because it seeks for him to accomplish results within sufficient means and time that require the best of instructors, the completest of apparatus, and a reasonable length of time. In consequence, he finds himself at the end of his public-school training thorough in little, superficial in much, and poorly qualified for the ordinary avocations of life.

In the judgment of the writer, there is a medium course, more beneficial to the great mass of pupils and less oppressive to the taxpayers. In his judgment, every pupil in the country school and in the grades below the high school should be required thoroughly to master the common branches—reading, writing, spelling, arithmetic, grammar, geography, the history of our own country, and somewhat of the best American and English literature—so that, when he leaves such grades at the age of thirteen or fourteen, he is reasonably prepared for the ordinary avocations of life. At the age named a very large majority of the young must leave school and go into the world to support themselves and often others dependent upon them.

It is manifestly unjust and contrary to the original idea of a public-school education that such pupils must take the high-school course or else go out of school without the mastery of such fundamental branches. The first function of a public school, then, is to give the pupils a thorough mastery of the common branches, or, as they are sometimes called, the bread-and-butter branches, and so much of the best American and Eng-

lish literature as will give them a taste for, and judgment of, the higher and better class of books. A correct taste for books, acquired in early youth, will have a most important influence on the after life of the pupils. It will give them a higher life and make them better citizens.

We now come to the high school. Shall it be its function to be a small college, teaching many things superficially, as with its limited means and time it must ? or a preparatory school for one ? or shall it be a school unto itself, teaching thoroughly a few things, but such as are most nearly related to the ordinary avocations of life ? It has been fairly demonstrated, I think, that to make it the first (a college) is economic waste, with municipal bankruptcy following. As to the second (a preparatory school), it is said, on apparently good authority, that only four out of every hundred who graduate from the high school ever take a college course. Is it not, then, a manifest injustice to the ninety and six that the high-school curriculum should be loaded down with studies that are dependent for their utility on a larger and stronger pursuit of them, the means for which are furnished by the higher institutions of learning ? It seems to the writer that we ought not to attempt to make the high school a college, nor a preparatory school for one ; that the interests of the four should not be made superior to those of the ninety-six ; but that such studies should be taught as will best promote the interests of the great majority, and that no more studies should be pursued than can fairly and reasonably be mastered in the time and with the means provided.

Assuming that the elementary studies have been mastered in the grades, as indicated, then the high-school course should consist of (1) those studies that are of general use and the least special in their nature ; (2) those additional studies that afford the best mental discipline, considering also their usefulness. Such a course would include a larger study of arithmetic and history and grammar, the study of algebra and geometry, of American and English literature, of physics, of the science of government or economics, and of one foreign language ; and that language should be chosen the study of which gives the best training in the science of grammar, in the use of language and the close discriminations thereof, and the best mental discipline. In my judgment, the Latin most nearly covers the desired points. Its utility in giving a more perfect knowledge of English words is very great, far exceeding that of any of the modern languages.

This plan would eliminate the study of modern languages, that, to be practical, must be studied in early youth, when the vocal organs are flexible ; of the sciences, the utility of which is dependent on years of study ; and of all such specialties — as stenography, typewriting, and telegraphy — that are no more entitled to places in the high-school curriculum than are the mechanical arts.

The true function, then, of the public school is that the education given therein shall be (1) practical for the everyday life of the pupil; (2) thorough, not superficial; (3) in the line of giving mental strength and discipline. Thoroughness will make bread winners and good citizens. Superficialness will have as its results failures in life and indifferent citizens. If no more is attempted in our public schools than can be thoroughly mastered by the pupils in the time devoted to public-school life, then that education will take on a new meaning; then the high-school graduate who can write a legible hand, spell correctly, read intelligibly, and has a proper familiarity with figures and the use of good language, will cease to be the exception to the rule; then will it cease to be an open question whether the schooling has incapacitated the pupil for the ordinary avocations of life; then will the taxpayer have some relief from the heavy public burdens, as, also, a consciousness that there has been a full equivalent received for the expenditures made.

DISCUSSION.

WM. S. MACK, Aurora, Ill.—The true function of the public school should be governed by the community, as it is impossible to prescribe a definite curriculum for all the schools in the country.

F. D. PEASE, Cedar Falls, Ia., was opposed to bankrupting the municipality to teach a number of the so-called fads.

JOHN E. BRANDEGEE, Utica, N. Y., stated that the gentleman who delivered the address on "The True Functions of the Public Schools" had not discussed the real question, but had discussed the question of high schools.

P. N. SIEGLER, Dayton, O., maintained that the object of the public schools should be to make safer and better citizens, that all new ideas in education should be tested, and boards should not be backward in so doing; that the high school is the people's college, and its curriculum should be regular college work.

B. R. VINEYARD, St. Joseph, Mo., held that the paper read by Mr. Sears was, in the main, correct. He said boards of education stand between those people who want to spend too much money for education and those people who do not want to spend any money; therefore, it was the duty of the board to do the best with the means at its command and to see that pupils receive a good practical education.

WM. H. BENNETT, Milwaukee, Wis., said it is impossible to leave it to a community to decide matters pertaining to education. Communities do not realize the advantage of progress in education. Teachers should stimulate new ideas and do all in their power to put them in practical use. Teachers' conventions were held for the purpose of making progress in education, and the same was true of the conventions of the boards of education.

ADRIAN HOUTKAMP, Milwaukee, Wis.—The public-school system is the bulwark of the nation, and the foundation of it cannot be built too strong. Boards of education should see to it that pupils receive such a training that, when they graduate, they will be capable of meeting the battles of life.

W. N. SHEATS, State Superintendent of Public Instruction, Florida.—All schools should be public, from the kindergarten to the university. If but 1 per cent. reached the university, and although the desired result was not accomplished, nevertheless the people were benefitted thereby, as the education obtained by the 1 per cent. was a blessing to the public.

SELECTION OF SCHOOL BOARDS—A COMPARISON OF METHODS IN OPERATION.

BY T. H. WATKINS, PRESIDENT BOARD OF EDUCATION, LOUISVILLE, KY.

The subject, "Selection of School Boards—A Comparison of the Methods in Operation," from the fundamental requirements of the case must be treated chiefly from a statistical standpoint; consequently, if this paper should in any manner prove instructive, the absence of entertainment may be pardoned.

For convenience, we may arrange the principal (102) towns and cities of the United States into two classes: (1) those whose census shows a population of 22,000 to 50,000; (2) those whose census shows a population of 50,000 or more.

Of the first class (50 towns) the statistics already published in school journals indicate, concerning the constitution of school boards:

Average number of members.....	12
Average term of office.....	3 years
Number of towns that elect.....	41
Number of towns that appoint.....	9
Towns where boards serve from wards.....	17
Towns where boards serve "at large".....	31
Towns where boards have combined methods.....	2

From correspondence with officials of the fifty-two larger cities of the United States is digested the following tabulation:

SCHOOL BOARDS OF CITIES OF 50,000 AND UPWARDS.

Cities.	Mem.	Term.	How constituted.
Albany, N. Y.....	7	7	Appointed at large by mayor.
Allegheny, Pa.....	84	3	Elected from wards.
Atlanta, Ga.....	18	6	Appointed by city council—three from city at large, fourteen from seven wards, and one <i>ex officio</i> .
Baltimore, Md.....	22	2	Appointed by joint session of city council; mayor is <i>ex officio</i> .
Boston, Mass.....	24	3	Elected at large.
Bridgeport, Conn....	12	3	Elected at large.
Brooklyn, N. Y.....	45	3	Appointed by mayor.
Buffalo, N. Y.....	..	..	Has no board, but a "school committee" of board of aldermen. Superintendent elected at large every four years.

SCHOOL BOARDS OF CITIES OF 50,000 AND UPWARDS—*continued.*

Cities.	Mem.	Term.	How constituted.
Camden, N. J.	8	2	Appointed at large; mayor member <i>ex officio</i> .
Charleston, S. C.	10	4	Elected, six from districts; appointed, four by governor.
Chicago, Ill.	21	3	Appointed at large by mayor.
Cincinnati, O.	31	3	Elected from wards.
Cleveland, O.	7	2	Elected at large.
Columbus, O.	19	2	Elected from wards.
Denver, Col.	6	3	Elected from districts.
Des Moines, Ia.	6	3	Elected at large.
Detroit, Mich.	16	4	Elected from wards.
Evansville, Ind.	3	3	Appointed by mayor.
Indianapolis, Ind.	11	3	Elected by wards.
Jersey City, N. J.	13	2	Appointed by mayor — one from each of twelve wards, one at large.
Kansas City, Mo.	6	6	Elected at large.
Los Angeles, Cal.	9	2	Elected by wards.
Louisville, Ky.	14	2	Elected by legislative districts.
Lynn, Mass.	21	1	Elected, seven each year, term one year.
		3	Elected, four each year, term three years; mayor and president of council members <i>ex officio</i> .
Lincoln, Neb.	9	3	Elected at large.
Memphis, Tenn.	5	4	Elected every two years, three at one time and two at the next time. School people delighted with a small board.
Milwaukee, Wis.	21	3	Appointed by non-partisan commission of four. This commission appointed by mayor. (Law of 1897.)
Minneapolis, Minn.	7	6	Elected at large, biennially, two members, then two, then three.
Newark, N. J.	30	2	Elected from wards.
Hew Haven, Conn.	9	3	Elected at large.
New Orleans, La.	20	4	Appointed, twelve by city council, four by governor of state.
New York, N. Y.	21	3	Appointed at large by mayor.
Oakland, Cal.	11	2	Elected, seven from wards, four at large.
Omaha, Neb.	15	3	Elected at large.
Paterson, N. J.	8	2	Appointed by mayor from wards.
Philadelphia, Pa.	38	3	Appointed by a commission composed of the judges of the Common Pleas Court.
Pittsburg, Pa.	38	3	Elected from districts,
Providence, R. I.	13	3	Elected ten each year from wards, three <i>ex officio</i> .
Reading, Pa.	64	4	Elected from wards.
Richmond, Va.	9	3	Elected at large.
Rochester, N. Y.	20	2	Elected from wards.
St. Joseph, Mo.	6	6	Elected at large.
St. Louis, Mo.	12	6	Elected at large.
St. Paul, Minn.	7	3	Appointed at large by mayor.
Salt Lake City, Utah.	10	4	Elected, two from each of five districts.
San Francisco, Cal.	12	2	Elected at large.

SCHOOL BOARDS OF CITIES OF 50,000 AND UPWARDS—*continued.*

Cities.	Mem.	Term.	How constituted.
Syracuse, N. Y.....	19	2	Elected, one from each of nineteen wards. (Proposed new charter is five at large.)
Toledo, O.....	15	2	Elected by wards.
Trenton, N. J.....	8	2	Appointed at large by mayor.
Troy, N. Y.....	7	3	Appointed at large by mayor.
Washington, D. C....	11	3	Appointed by government commissioners.
Wilmington, Del....	24	4	Elected from wards.

RÉSUMÉ OR DEDUCTION.

From the fifty-two larger cities:

Number that elect.....	32
Number that appoint.....	17
Number that combine both.....	2

Of those that elect:

By wards.....	18
At large.....	12
Combined.....	2

Of those that appoint:

From wards.....	2
At large.....	12
By peculiar methods.....	3

Average size of boards..... 17

Average term of office..... 3½ years

Largest boards.

Allegheny.....	84
Reading.....	64
Brooklyn.....	45
Philadelphia.....	38
Pittsburg.....	38

Smallest boards.

Evansville.....	3
Memphis.....	5
St. Joseph.....	6
Des Moines.....	6
Kansas City.....	6

For term of election:

For a term of 2 years.....	15 cities
For a term of 3 years.....	22 cities
For a term of 4 years.....	7 cities
For a term of 5 years.....	no city
For a term of 6 years.....	5 cities
For a term of 7 years.....	1 city

From the above, the three-year term is evidently the most popular.

Dividing the territory roughly into sections—North, South, and great West (including Indiana, but not Ohio in the West)—we find for the average size of the boards:

North.....	24
South.....	12¾
West.....	10¾

showing that in territorial development the tendency is toward smaller boards.

The high average of the North is due, to no small extent, to the one state, Pennsylvania, where the conservation of Teutonic blood is not prone to innovation or experiment. As a sample of the school methods of this state we quote in full the response of the secretary of Pittsburg Central Board :

This city is divided into thirty-eight (38) subdistricts, each of which has a board of six (6) directors, elected by the people of the subdistricts for a term of three (3) years. These boards have power to levy tax, borrow money, purchase ground, erect buildings, and elect teachers.

The Central Board is composed of thirty-eight (38), each subdistrict electing a member once in three years. The Central Board has charge of the high schools, pays all teachers' salaries, adopts the course of study for the entire city, and purchases books and supplies, which are furnished free to the pupils.

The Central Board receives its money by appropriation from the council, the amount being included in the general levy; the funds required by the subdistrict boards are raised by direct tax in the respective subdistricts.

From statistics and answers to inquiries it appears that the tendency of the times is toward boards with smaller membership and longer terms. It is evident that three years is the popular term, and if one-third of the board be subject to change each year, it is likely that nine will ultimately prevail as the model number of members.

The sentiment is rapidly growing in favor of members, whether appointed or elected, serving from the city at large and not from wards or districts.

Concerning the questions: How should school boards be constituted? and, What should be their province or limitation in the discharge of official duties? no ventilation of the individual views of the writer would be as valuable as opinions already at hand of well-known and experienced educators.

At the Woman's Educational Association, in Boston, a letter from President Truman J. Backus of Packer Collegiate Institute recommended that

1. The business administration and scholastic administration of public schools should be kept as separate as possible. There should be centralized authority and responsibility in each of the administrations.

2. There should be in the board of education a committee on instruction. The head of the business department of the school system should, I think, be a member of each of these committees, without a vote.

3. The board of education in a city where the population is as heterogeneous as it is with us should be appointed (probably by the mayor) — not elected by the people.

President Gilman of Johns Hopkins University also sent a letter, in which he made the following recommendations :

It seems to me that in a large town there should be a small board of education, made up by the best men that can be enlisted, without regard to the wards in which they reside.

This board should serve without pay, but it should be relieved of details by properly paid clerical assistants. It should include men who are capable, as the water commissioners, the park commissioners, the police commissioners, the harbor commissioners are capable of directing a very important branch of the public service.

When such a board is organized, it will be clear that there are three main branches of the work: (1) financial accountability; (2) buildings and equipment; (3) education.

I do not see how it is possible to administer such a great system without a corps of highly competent persons, who are properly paid for their services, and are held to strict accountability by the general board. These paid officers will, naturally, belong to three classes:

1. Accountants, to be chosen, as the tellers and bookkeepers of a bank are chosen, for their fidelity and accuracy.
2. Properly qualified inspectors of buildings, men who understand the arts of construction, heating, plumbing, etc.
3. Educational guides and leaders, men and women, worthy of appointment in any educational institution, because of their knowledge, character, and administrative powers, as well as their devotion to the service of the public through the agency of the public-school system. They should be supervisors and inspectors of the work of instruction.

Secretary Hill of the State Board of Education and Superintendent Seaver favored President Draper's plan for a small school board for legislative purposes, and the establishment of two departments for business and instruction.

For calm, deliberate, conservative opinions, based upon observation in many cities and in all sections, perhaps the fairest are summed up in the *April School Board Journal* by Frank A. Fitzpatrick:

I believe that there can be no general law laid down as to what is the best type for a board of education. It is a question of communities, of development, and of evolution. Each community has its own problems to solve, its own peculiar environments, and the needs of this community vary at different periods of its growth. In communities where the board of education is large there is usually a developing public sentiment in favor of a change from a large board to a small board. In communities where the board of education has been for a number of years a small one there is a tendency in favor of a larger or more representative body. Nor can one general law be laid down upon the question whether members of boards of education shall be appointed by the mayor or by judges of the district court, elected by the people at large, or by wards. It is, of course, important that the quality of the members of the board of education shall be high. But there is room for a great deal of discussion as to what we mean by quality. It is not at all certain that the most cultivated and best educated people in the community will make the best members of a board of education. There are many instances where representatives from this class of people have been distinctly the worst members on the board, so far as the interests of the schools are concerned. Reform boards that are elected during times of excitement, with the idea of correcting some great alleged evil, and composed of the best citizens, are often much worse, so far as the interests of the schools are concerned, than their predecessors.

The really vital interests of the schools, so far as they are affected by the efficiency or non-efficiency of a board of education, are the treatment by the board of questions involved in the election of a superintendent and teachers, the dismissal of teachers, and questions concerning the course of study and the adoption of text-books.

The best schools are to be found where the people in charge are not clamoring for

more power, and where they are not changing the course of study every other year. Primarily, the character of the work done in schools depends upon the quality of teaching. All the other accessories are incidental and immaterial.

A few simple changes in the by-laws of a board of education will greatly simplify the problem. The object of any rational reform is threefold: (1) To segregate the purely professional sides of the schools, as far as the initiative is concerned, into the hands of the superintendent. (2) The maintenance of a certain freedom among the teachers and principals, within certain board limits. (3) The segregation of the interests represented by the business side into such simple forms as will enable the members of the board of education to do more than their duty without devoting an undue amount of time to the public service.

The board of education ought to run the schools, through its executive officers. It ought not to be forced to spend hours of its time debating details. If reformers would confer with the right spirit with their local school boards, instead of rushing off to the legislature to secure new legislation, wise changes could easily be made.

DISCUSSION.

JOHN E. BRANDEGEE, Utica, N. Y. — From the admirable paper by Mr. Watkins, read in connection with the article of Professor Boykin, in the *Educational Review* for March, 1896, which goes more into detail as to the workings of some exceptional city systems, it is clear that no one system of selecting school boards has yet received any wide or general acceptance. This is probably mainly due to two causes: First, the recent rapid growth of our cities, which has made the problem of school government a constantly changing one; and, second, the lack of opportunities for comparison and discussion of the systems of different communities. This latter cause will be minimized and simplified by the growth and work of this Department of School Administration of the National Educational Association, and we may confidently anticipate the development in the near future of a uniform and efficient system prevalent throughout the country, not based on fancied local necessities, nor hampered by local ignorance, passion, and prejudice, but resting upon broad experience and wide observation.

This uniform general plan must be based on principles of universal application, while it is elastic enough in details to meet the varying needs of different communities. In working towards this result, we are met at the outside with the fact, so forcibly presented by Mr. Frick, that there is in each city an existing and established order of school affairs, and that hardly any two cities of considerable size are alike in their systems. Our divergencies and differences, therefore, render imperative the formation of such bodies as this department and the holding of such discussions as this. They also compel conservatism in action, because hasty action does not necessarily, not even probably, result in permanent and healthy advancement. But conservatism is not inaction. We must progress along right lines. Many a plan which seems perfect on paper proves faulty in practice. We cannot inaugurate a workable system merely by passing a resolution to do so. But we may and shall, by investigation, by comparison, and by experiment, work out harmonious and practical general principles which will serve as a uniform basis of school administration throughout the country.

Permit me to submit a few considerations bearing on the general subject, for the purpose of eliciting discussion and comparison of views:

First, should we not definitely determine what are the proper functions of a school

board before we attempt to lay down rules for its selection and organization. There is doubtless a widespread opinion that the school board should have supreme and immediate control and direction of every detail of school activity. Upon this theory, the adoption of a course of study, changes in text-books, improvements in methods; qualifications, selection, assignment, and discharge of teachers; the basis of promotions both for teachers and pupils, and every other purely professional duty, should be discharged by the board. It is evident that, if these duties are to be performed in an ideally perfect manner, the board should be composed of professional educators, of persons whose lives have been spent in acquiring the intricate and technical knowledge necessary to the proper determination of these professional questions, and not composed, as is now usual, of amiable and well-meaning, but untrained individuals, who leave their business for a few hours in each day or week and faithfully but hopelessly endeavor to acquaint themselves with these details. The uniform opinion of expert writers on this subject seems to be that of Mr. Fitzpatrick, as quoted by Mr. Frick, which states as the first object of any rational reform "to aggregate the purely professional side of the school, so far as the initiative is concerned, into the hands of the superintendent." The Committee of Fifteen says: "The whole matter of instruction must be placed in the hands of a superintendent of instruction, with independent powers and adequate authority, who is charged with full responsibility." These cogent quotations afford a clew as to what is the proper function of a school board.

Focalize responsibility for the professional work upon the superintendent, and leave to him the working-out of the details. So on the business side of your duties—employ competent heads in each department, as repairs, construction, purchase of supplies; and hold them strictly responsible. Upon the board will still rest the ultimate responsibility for all departments. The analogy of the board of directors of a corporation, so strikingly used by Mr. Mack at Buffalo last year, is very appropriate. The school board, like the directors of a large corporation, should not be occupied with the details and routine of the business. Rather it should be its high office to occupy itself with results. If the results are good, you may be sure that your business is being well conducted, and that well-meant, but ill-directed interference on your part will be productive only of evil and confusion.

If the results obtained are not satisfactory, you should ascertain whether this is owing to faults in your general policy, or to defective execution of that policy. This determined, change the plan or improve its execution. Fix the responsibility, and then act fearlessly.

If these be the proper functions of a school board, it would seem to follow that in its composition and selection it would be preferable to have a small body elected or appointed from the city at large, and not from districts, and having a term of office sufficiently long to permit forming and carrying out a consistent policy. A large board is apt to be indifferent as well as unwieldy. It leads to a divided and shifting responsibility. It relegates its work to committees, which means lack of uniformity and unity of purpose. It magnifies differences and dissipates effective energy.

A board selected or appointed from the different districts is by its very nature conflicting, sectional, and divergent. A board having a short term of office is unstable, inconsistent, and variable. It also usually lacks that experience and knowledge which are essential to a proper consideration of the problems constantly arising. The great necessity is to arouse in the community a keen sense of the real object of the public-school system. When this is once done, the right kind of men will find places on the board, whether they take office directly from the people or immediately through the mayor or some other appointing authority. It seems humiliating, if not ludicrous, to have to admit that in most of our American cities the chief and only end and aim of the public educational system is persistently and perversely ignored in the selection of school trustees. The real and only true purpose of the schools is to educate the children. To

the carrying-out of this purpose, board, superintendent, teachers, and all the rest are but agencies and instrumentalities. No individual or set of individuals, no ambitions or schemes, should be paramount in importance to the child and its proper education.

The indispensable tests of eligibility to any official position in the school system should be competency to perform the duties of the place and a steadfast purpose to devote every energy to the intellectual development of the pupil.

Let me ask, in all fairness, whether, in the vast majority of our American cities, these tests are applied in the selection of the members of our school boards. As a matter of fact, in this respect are not our schools made the football and plaything and tool of partisan or factional advantage, of personal ambition or malice, and too often of speculation or pecuniary profit? Too many times are men selected for this important office to "strengthen the ticket," to conciliate this or that faction, to attract this or that race or sectarian following, to pay some political or personal debt, to fatten the party purse or to punish the partisan enemy, to help a friend or to harm a foe. How often do we find men forcing or attempting to force themselves into this important office to make sure of a fat contract for themselves or their friends, to provide a place for some poor relation, to "organize" the schools in aid of their personal ambition, to "get even" for the removal of some discredited and discarded teacher or employé, or, perhaps, most unworthy of all, to wreak some personal vengeance or gratify some personal spite!

These things are common — far too common. Yet in many communities they are endured without censure, and sometimes even with complacency. Wherever this is the case, there is a departure from what should be our high ideal. The welfare of the child is sacrificed for the benefit of the party, the faction, or the individual. The public service is debauched, and the public interest is forgotten. Until the popular conscience is so awakened as to insist, first and foremost, that the board shall devote all its energies to the complete education of the child, and until most school boards recognize this to be the whole sum and substance of their duty, it will make but little difference whether they are appointed or elected. To the attainment of that end, this department, by reason of its representative character, its wide extent, and its earnestness of purpose, has presented to it an opportunity which should not be neglected or thrown aside.

MRS. ALICE BRADFORD WILES, Freeport, Ill. — School boards should hold superintendents responsible for just results. They should, however, stand part of the responsibilities of hiring and discharging teachers and selecting text-books. Boards should not interfere with the technicalities of educational work; that should be left to the superintendent and teachers.

PRESIDENT H. L. GETZ. — I am opposed to the granting of too much power to the superintendent, which will lead, if carried to its logical conclusion, to one-man power. It is un-American, and I hope the day will never come that the authority of the entire management of the public-school system vested in the superintendent will be looked upon as American. Members of school boards should not go into the schoolrooms and direct the details of the educational work, it is true; but they should be the responsible head and have in charge the entire management of the school system.

A. J. LINDEMANN, Milwaukee. — Directors of corporations plan with and consult the superintendent regarding the business that they may be engaged in, and I believe that boards of education should do the same thing.

JOHN B. JONES, Utica, N. Y. — The difficulty with boards of education is that they have not the backbone to discharge a superintendent after they have lost confidence in him. Boards of education having in their employ a superintendent in whom they have confidence have no trouble in the management of the school system for which they are responsible.

*SCHOOLHOUSE CONSTRUCTION—THE IMPORTANT ENDS
TO BE ATTAINED IN THE PLANNING AND
BUILDING OF SCHOOLHOUSES.*

BY A. H. KIRCHNER, ARCHITECT, ST. LOUIS, MO., SCHOOL BOARD.

Ever since man has arrived at any degree of civilization and luxury, he has demanded for himself something more than the Tartar's tent or the shepherd's hut, and out of man's demands for something more than mere protection architecture was born.

With every system of religion that has appeared upon the earth a corresponding system of architecture has appeared, which has influenced and tintured all modern architectural forms, and now nearly nineteen centuries of Christianity have peopled the world, and as yet we are without any definite system as regards the symbolism or materialization of school buildings.

Of all types of buildings the school building stands out most conspicuously in its want of rational treatment. Churches, theaters, office buildings, each have had the best talent of the combined civilized world; but the school building, so important an element in the prosperity and progress of our country, is as yet far from perfection, and yet I believe the day is surely approaching when we can thoroughly consider the physical welfare of our children as well as the mental training.

To secure a perfectly sanitary, useful, convenient, practical, and, lastly, ornamental success in a school building deserves the serious attention of every right-minded architect and every public-spirited man connected with the school system.

The architect has duties, but so also has the school board for which he labors. The architect should be prepared to provide for such conveniences, such arrangement of light and shadows, should give such attention to details of comfort and practical working of the classes, should understand in its practical operation the relation of the teacher to the child and the child to the teacher, that school days shall be reminiscent, not of tacks in seats, jackknife-carved benches, pasted-up windows, and disfigured walls, but a memory of a dignified, self-respecting, serious yet joyous youth, such a youth as builds itself up into citizens of the greatest nation—manly and womanly beings, that shall lead in everything that tends to make man more manly and woman more womanly—proper surroundings for those that are determined to lead in civilization.

The school board, on the other hand, has no light task, either, for it must bear the responsibility of the results in their entirety.

To begin, then, at the beginning, the first move is the selection of a lot for the building.

To those who never have given it their serious consideration the selection of a school lot is fraught with much labor, and members of school boards who are called on for the first time to do this important work should take time for reflection, and look on the purchase as not being a temporary affair of a few years, but a purchase for many years to come. But no sooner does the public find out that a lot is to be selected for this purpose than every real estate agent in the town, every owner of a lot—good, bad, or indifferent—begins a wild scramble to make a deal. Each member is besieged by every friend or relative he ever possessed, until he finds himself, unless a man of rare discretion and judgment, confused and sometimes even forced to favor some sink-hole unfit for any building purpose, let alone a school.

The lot should by all means be high, for proper drainage; the neighborhood should be moral; it should be free from proximity to noisy manufacturing interests, from the dangers of steam and electric cars, from disease-breeding dairies and stagnant ponds.

It should be located on properly finished streets, to insure comfortable means of access to and from school, and to avoid annoyance to both teachers and parents, as well as to the children themselves.

The building itself should be placed in the center of a spacious lot, leaving room thereby for trees and other attractive improvements.

The lot on both sides and rear should have a close board fence, along which seats can be built; the front should be of such description as the expenditure may warrant, as a matter of appearance.

The first floor of the school building should be at least five feet above the terraced lot, and the terrace of said lot should be not more than three feet above the street level.

The height of the first floor above the terrace affords sufficient light for the basement, which is an important factor in all school buildings, and the general height above the street prevents the distraction of the pupils.

All materials used in the construction of school buildings should be of a permanent character; hence all basements or cellars should have the walls of stone, since it is impervious to water and less liable to disintegrate. The stonework should extend above the soil.

So far as brick buildings are concerned, both red brick with terracotta trimmings and buff brick with light stone trimmings give a harmonious and pleasing color scheme. Other combinations seem to give a "spotty" effect.

Fireproof buildings throughout are certainly the most desirable, but where economy will not permit of the entire building being fireproof, it is an essential feature to have at least the corridors so built.

However, fireproofing will by no means prevent a panic, no matter how much previous explanation you may have given to the children; discipline by principal and teachers alone can prevent a stampede when the children are once started.

All exterior sheet metal work should be copper, on account of its permanency. Too much care cannot be taken in selecting materials that are of the best and not the cheapest, for the cheapest cost more in the end in the shape of repairs arising from the daily wear and tear.

Where land and materials are reasonable, two-story rather than three-story buildings seem desirable. They are easier to manage for those in charge, they are more rapidly emptied, and necessitate less climbing of stairs for girls of tender years.

However, those interested must not lose sight of the fact that a three-story building is more compact and can be built for less money than a two-story building having the same number of rooms and designed to accommodate an equal number of pupils.

School buildings should have one central entrance in front, designed with some thought of its attractiveness, as it adds to the general appearance of the whole. Its characteristic features ought to distinguish it from a jail or an asylum for idiots.

This central entrance is for visitors; it affords additional egress for pupils in case of accident; and, when locked, prevents a superintendent from stealing in upon the unsuspecting teacher at the most inopportune time.

This entrance leads to a main corridor running the entire length of the building, and thus divides the class-rooms on each floor into groups of two or four rooms on each side of the corridor.

Side entrances should be provided, one on each side of the building—one for boys and one for girls—connecting with the main corridor and connecting immediately with stairways, one on each side of the main corridor.

Corridors should be very wide—not less than twenty feet—giving an opportunity for wardrobe screens for both boys and girls, and affording practical help in the dismissal of pupils. The doors in wardrobes swing both ways, and the panels are filled with wire screens. The top part of the wardrobes is of wire screening. The wardrobes are left open at the floor, and, with wire screening, all allow the air to circulate freely. In damp weather the wearing apparel has a chance to dry by the time for dismissal.

There should be a sufficient number of stairways, centrally located and conspicuously placed. These stairways ought to be concentrated in a general part of the corridor, which is rightly termed a "stairway corridor." This avoids that ceaseless tramp back and forth on the different

floors. The stairways themselves should be of easy rise and sufficiently wide tread; not less than five feet in width, with strong hand rail, balustrade, posts, and newels. All sharp corners and tempting ornaments should be abandoned.

The proper discipline should be exercised at all times during the use of the stairways, and the architect thereof not be led by a doting mother into stretching a wire netting after the manner of a "Ringling Bros." trapeze performance, when her rebellious offspring slides down the balustrade and falls to the floor below.

With the arrangement of corridors mentioned before, it is possible to have each room connect directly with the corridor by means of two openings, the doors of which swing both ways, and are provided with glass panels. These doors have the advantage of being noiseless, of conforming to the law of opening outward, of taking up less space, and of always being closed. Class-rooms should be twenty-seven feet by thirty feet for a quota of forty-five pupils, thereby giving to each pupil eighteen square feet of floor space. The height of room should be uniform, and, with the floor space mentioned before, should be at least thirteen feet, giving each pupil two hundred thirty-six and one-fourth cubic feet of air space. This ought to satisfy the most exacting board of health, whether it be a political pull or a combination of misguided reformers.

Each class-room ought to be provided with a wardrobe for the teacher, in which there is a washstand and other conveniences, also a large closet for books and materials required by the pupils.

Each school should have a good-sized principal's office, and an additional room for library, reference books, and cabinets.

In large schools, where the same grade occupies more than one room, it is desirable that the rooms be connected by means of sliding doors, because many lessons and exercises of different character can be given with more uniformity of results, in the least amount of time.

By this arrangement of corridors, stairways, and connecting rooms, the necessary supervision is facilitated. In the absence of one teacher of connecting rooms in the corridor and stairway, the other teacher is enabled to supervise the adjoining room as well as her own room. This is an immaterial consideration in small schools.

The finishing of the rooms should be uniform and as cheerful as possible. The woodwork should be natural wood, oiled and varnished. Rough plaster with a good water-color tint makes a pleasing wall. When the ceiling is plastered, it should be smooth plaster of Paris finish and white. Bare brick walls, without decorative accessories, are too suggestive of a prison cell, and the light reflections therefrom are very disagreeable.

Double flooring, well stripped and deadened with heavy building paper, is inexpensive and far more cleanly than interlinings of refuse

mortar and rubbish used between wooden joists. For obvious reasons, picture moldings should be placed in every room.

Careful inspection should be made as regards the suitability of the seatings in every room in every school; age and grade are no criterion, for a certain grade in one locality might demand an entirely different set of desks from the same grade in another locality.

Seats should be graded from front to rear, to accommodate pupils of different stature. Nearly all teachers prefer single desks on account of discipline and sanitation. The color of desks is a matter of fancy; the dark ones, however, repair more satisfactorily than the light ones.

Desks should be placed in the rooms so that the light falls over the left shoulder and back of the pupils; and with eighteen square feet of floor space to each pupil, the desks can be so placed as to provide proper aisles.

The question of platforms for teachers is a debatable one. There are arguments for and against the platform. It seems to be the fashion at present to dispense with them, and thereby relieve the teacher of the accusation of being a kind of policeman rather than a friend and helper, on the same level.

No teacher ever finds that she has too much blackboard space. In the past year I have inserted panels of slate in the folding doors between rooms, and am told that they are quite convenient, especially in rooms where children face the folding doors.

When I speak of blackboards, I mean natural slate boards, for there is no satisfactory substitute for a slate board, which, once set, becomes a permanent fixture.

Before leaving this subject of furnishings I should like to call attention to the fact that nothing as yet has been found entirely satisfactory for regulating the windows through which the sun streams.

Inside folding blinds are expensive, clumsy, and nearly always dirty. Venetian blinds are also expensive, and in need of repairs about two-thirds of the time. Ordinary window-shades are perishable, noisy, and open to the criticism of the drawing supervisor, by allowing the light to leak in on the sides. One of the most important features in a school building is the lighting of class-rooms. There should be enough windows to give square feet of light equivalent to about 30 per cent. of the floor space of rooms. With four and three-fourths square feet of light per pupil a class-room seems to be sufficiently lighted.

In order to secure this amount of light, two sides of the room must be utilized for windows. Enough light cannot be obtained by the German method of lighting, which permits the entrance of light from one side only, and which may serve very well in other buildings, but which becomes intolerable in rooms having southern exposure only, into which

the sun beats all day. Several years ago ribbed glass, on account of its refractory properties, was used in wide-mullioned windows of one of our schools, and, as a result, in a very short time the eyesight of the pupils was so impaired that the ribbed glass was removed and plain glass substituted.

Window panes must be large enough to admit a free entrance of light, that the eye may not be wearied by shadows and cross shadows. The windows must be so placed that the ceiling and the distant corners of the room will be well lighted.

Corridors can be lighted by means of large transoms over each door, by windows on stair landings, and by large windows at the end of the corridor.

In large cities, where space is limited for school yards, conveniences should be placed in finished basements, and, no matter what the economy may be in other directions, no expense should be spared to make these conveniences thoroughly sanitary in every respect. Not only the architect, but the principals and teachers, should have a constant supervision over these conveniences.

In the school building of the present, next to light, there is hardly a question which demands so much attention as the heating and ventilating. The day for furnishing mere heat has gone by.

The public demands absolute and perfect comfort for each pupil. To this end, after a thorough investigation of all kinds of heating and ventilating apparatus, I can safely recommend a power system by which the fresh air is forced over a heated surface into the class-rooms at a rate which insures each pupil the requisite amount of fresh, warm air. A certain safe degree of temperature should be established in all schools and regulated automatically.

Personally I consider the Johnson system of heat regulation, manufactured in Milwaukee, to be the only reliable one, and which has been used successfully in the St. Louis schools for the past five years. This relieves the teacher of all responsibility and worry, and permits her to give her undivided attention to the instruction of the classes, for with a satisfactory power system of heating there is no necessity for meddling with the windows or doors.

So far as removal of foul air from class-rooms is concerned, it is only possible in a perfect manner by means of "exhaust fans." However, the space around the smoke flue, if it is sufficiently large, may be utilized as a conductor of foul air by connecting it with the different class-rooms.

In a large school—twenty-four rooms, for instance—it is a good thing to place the boiler house outside of the main building, thus leaving space in the basement for other purposes.

During my connection with the St. Louis public schools, several

desirable accessories have occurred to me, some of which I have been able to secure. Two of the schools have automatic clocks in the tower, connecting with the class-room clocks, all regulated by a master clock placed in the principal's office. One school has a modeling room in the basement, arranged with long tables and benches of different heights. A room with a northern light properly distributed for the use of the drawing classes exclusively has become a necessity in a large school having high-grade pupils.

I have always wished to add a lunchroom, in which, with some degree of comfort, pupils might eat their luncheon, and thereby keep the class-room free from dirt and refuse. A washroom connected with the lunch-room would add materially to the comfort of both teachers and pupils.

Before closing, I should like to call your attention to some of the noticeable mistakes in school buildings in different cities, and which can be easily avoided by any school board: No front entrance, improperly constructed vestibules, mansard roofs; dark, narrow, and steep staircases; winding stairs; poorly placed staircases; stone flagging for floors and stairs; dark, narrow corridors; bare brick walls; some very large rooms accompanied by very small rooms; noisy, of mill construction; dark woodwork; posts or columns in rooms; floors of different level; poorly lighted rooms; colored and ribbed glass panes; no wardrobes for pupils; and kindergartens in the same building; but the worst of all is an original plan to which no practical addition can be made.

You have noticed, doubtless, that I have confined myself entirely to public schools in large cities and have left untouched the subject of rural schools, schools in small towns, and schools in thinly peopled districts, which, after all, require more consideration, judgment, and experience in the building than city schools, for each individual school possesses environments peculiar to itself alone; but no matter where the school building is located, it must be a structure suitable to its purpose. It must aid the teacher, not retard her.

In a school building there can be no pleasant little nooks and corners, so often conducive to attractive ornamentation, but be the exterior ever so plain, there is no excuse why the interior should not be practical and cheerful; and yet, when all is said, a school building is only a school building, and where is the school board that does not have to make one dollar do the service of five, and where the taxpayer who does not think that each dollar in the school fund ought to have the purchasing value of ten?

And lastly, the architect of any school board, besides knowing his own profession well, must be thoroughly acquainted with the daily routine of school life.

During my twenty-three years' connection with school work in the

St. Louis schools the most valuable suggestions have come to me from the teachers in the grade work, and I have discovered for myself that the school building is no place for theories or experiments.

DISCUSSION.

ADRIAN HOUTKAMP, Milwaukee, Wis.—Having listened attentively to the very excellent paper just read by Mr. Kirchner, one would readily say, what more can be said on the subject, for it does seem as if everything needed in and about a school building has been brought to our attention. To lead the discussion on this topic, however, I will say that no greater wrong can be done a child than to deprive it of its possibilities for future health and happiness by placing it in buildings, for six hours a day, that are totally unfit to house it. To remedy this all too frequent source of trouble and aggravation was the object of the committee in bringing out this topic.

"We plant the seeds of knowledge in the minds of children with infinite care, and then, with proportionate carelessness, we neglect their frail bodies." Care for the physical should be the first thought of every wise parent and teacher. The schoolhouse of the past could not boast of the imposing curriculum which is the pride of our schools of today, but it sent forth robust, rosy-cheeked, hearty boys and girls. There were no gymnasiums, no calisthenic exercises in that past, but there was an out-of-door life which developed brawn and quickened the brain.

The first consideration in the building of a school should be a suitable site; and one without proper drainage should not be accepted at any price. When we understand that a common brick will absorb a pint of water, and that moisture rises up and along the bricks of a building about as fast as it will run up a series of lumps of sugar, the importance of proper drainage becomes readily apparent.

The folly and bad effects of choosing a low site can be seen in a school building in this city, where, while the city purchased a space of 150×300 feet, with a slope of some six to seven feet on the long side of the same, the building was placed on the lowest end of the tract, so that all surface water would run *toward* the building, instead of *away* from it. How good results are to be obtained when men so little understand the requirements of a building I fail to see. Too frequently, however, the interests of the lot owner figure more prominently in the purchase of a site than does the good of the children.

Light is the second important matter. Too much light is as injurious as is an insufficient amount of it. The idea that light should come over the left shoulder of the child is good, but that alone is not sufficient. The light should neither be too strong for the one nor yet too weak for the other. Indeed, the great cause of defective sight so prevalent among school children in these days is caused by the light being insufficient, requiring a straining of the optic nerves.

Out of 53,000 children examined in the city of Baltimore, 9,051 were found with sight so impaired that it was declared unsafe for them to remain at school any longer. If this is the condition of things in that city, it is reasonable to suppose that the same trouble will be found in all cities.

Having been troubled personally with the glaze of a varnished desk or table, I am of the opinion that that is the real cause of the trouble, in that it in a measure blinds and blurs the vision. A close observer will find that, when the light is too strong for the

pupils who sit near the windows, and the curtains are drawn, the pupils sitting in the farther end of the room have an insufficient amount of light, and must strain every nerve to do their work. The remedy, it would seem, would lie in double curtains, one to let down from the top to the center, the other to pull up from the bottom to the center; that surely would control the light more equitably. The highly varnished desks or seats should not be allowed in the schoolroom, as that is an undoubted source of trouble.

Proper ventilation is certainly to come under the consideration of this topic, and it has occurred to me that the matter of ventilation is overdone at times. The builder guarantees that so many square feet of fresh air shall be forced into the building in a given time, and, to insure that amount, machinery altogether too strong for the needs of the building is put in, and a direct draft is the result. When that is the case — and it is so in at least two of the schools in this city — it becomes a positive detriment to the welfare of both pupil and teacher. The size and number of rooms should be carefully considered, as well as their exposure to cold and heat, not forgetting the number of pupils that are to attend the daily sessions. A remedy can and should be found.

While not directly a part of the construction of a building, the matter of equipment certainly becomes a part of it. In this connection, then, a few words on seating. A recent investigation in the city of Cleveland showed that nearly four thousand children were found whose feet did not touch the floor when seated, and over fourteen thousand were seated at desks either too high or too low for them. In our own city schools we have noticed that boards have been placed on the floor so that the feet of the children could touch the floor, while others again sat in seats altogether too low for them. This certainly requires a remedy, and one is found in the new adjustable desks and seats now being used in many places.

LIBRARY DEPARTMENT.

SECRETARY'S MINUTES.

FIRST SESSION.—THURSDAY, JULY 8.

President Melvil Dewey, of Albany, N. Y., being absent, the Vice-President, J. H. Van Sickle, Denver, Colo., opened the meeting with a few remarks.

Miss Mae E. Schreiber, State Normal School, Milwaukee, read a paper on the "Training of Teachers so that They May Co-operate with Librarians."

The paper was discussed by W. R. Eastman, Miss A. V. Milner, and Miss Schreiber.

A paper on "Observations upon Children's Reading" was read by Royal W. Bullock, University of Colorado.

The paper was discussed by W. R. Eastman and others.

A paper on "Room Libraries" was read by Miss Millicent Kaltenbach, North Denver, Colo.

Professor Richard Jones, Inspector of Literature, University of the State of New York, spoke on "The Moral and Literary Responsibility of Librarians in Selecting Books for a Public Library."

Discussion followed by John W. Cook, Normal, Ill., and others.

The following were appointed as Committee on Nominations and Organization :

F. A. Hutchins, R. H. Beggs, W. R. Eastman, Miss A. V. Milner, Miss H. B. Ely.

SECOND SESSION.—FRIDAY, JULY 9.

W. R. Eastman, Library Inspector, University of State of New York, read a paper on "How to Make Sure of Good Books in Our Libraries."

Wm. H. Smiley, Principal of High School, Denver, Colo., read a paper on "The Relation of the Library to Art Education in the Schools."

Wm. Hawley Smith addressed the department on the subject, "Literature and Democracy."

The Committee on Nominations and Organization reported as follows :

Your committee recommends :

1. That the Library Department secure an enrollment of those interested in its work.
2. That a committee be appointed to prepare and recommend lists of books and editions suited for the reading and reference use of pupils in the several grades of the public schools, to report at the annual meeting and to make partial reports from time to time through the press, and at as early a date as possible.
3. That a committee of not less than seven nor more than fifteen, which shall include the department president, be appointed to report on the relations of public libraries to the public schools, indicating methods of co-operation by which the usefulness of both may be increased.
4. That the appointment of these committees be made by the officers of the department acting as an executive board.

The report was adopted.

The following were elected as officers for the ensuing year :

President, L. D. Harvey, Milwaukee, Wis.

Vice-President, J. H. Van Sickle, Denver, Colo.

Secretary, Miss Myrtila Avery, Albany, N. Y.

AGNES VAN VALKENBURGH,

Secretary.

PAPERS AND DISCUSSIONS.

OPENING REMARKS.

BY J. H. VAN SICKLE, DENVER, COLO., ACTING PRESIDENT OF THE
DEPARTMENT.

It is a matter of regret to members of the department, and to no one more than to the Vice-President, that Dr. Dewey finds it impossible to be with us. His masterly presentation of the scope and aims of the new department at Buffalo makes it certain that we miss much by his absence; yet his representatives are here to bring the message of the great state which he serves, a state which has in a marvelously effective way put its splendid energy and a fair portion of its great wealth into the solution of the problem of reading for the people.

Conditions are favorable for a successful initial meeting, not only because of the strength represented by the names on the programme, but also because we meet here in Wisconsin among the pioneers in this library movement. As our discussions proceed, it is reasonable to expect much help from their experience. They were among the first, if not the first, to put in operation a practical plan for bringing the best books within reach of the people, and especially within reach of the children. From their published lists and methods of procedure other states have profited much.

Here two great educational forces, the library and the school, are represented. Neither can fulfill its true mission without the other. The teachers must rely upon the librarians for the supply of books; the librarians must rely upon the teachers to train library users. For the first time representatives of these two great forces have met for consultation, with a view to more intelligent direction of energy.

The librarians have been organized for twenty years, and through the deliberations of the American Library Association many questions of technical library economy have been settled, and the way has been prepared for effective work by our combined forces. In many localities the teachers have gladly availed themselves of library facilities offered through them to their pupils, and mutually helpful relations have resulted. To make universal what has in individual cases worked well is one of the objects of this department. This meeting should be, in part, an experience meeting.

Since half of the children leave school at the age of twelve, it is evi-

dent that education is largely an out-of-school affair. If education is not to stop with school, the library is the chief instrumentality for its continuance, and for its proper use the school can give the training. For the great masses the one thing that the school can do is to give the ability to read intelligently, to love to read, and to prefer literature to trash. It is the one duty of the school to develop in the child the power to educate himself after he leaves school. This it has done when it has cultivated in him the reading habit and developed literary taste. It makes not so much difference what our pupils learn as what they love. What they learn they will forget. What they love they will pursue through life.

For some years the laboratory or library method of studying literature and history has prevailed in the high school. An accessible collection of books for this purpose, as well as for entertainment, is coming to be an indispensable part of the equipment of every schoolroom. Probably these books should, where conditions permit, belong to the public library and be loaned to the school for definite periods of time. What books are most desirable, how to make them accessible without much red tape, and how to get them wisely used, are questions of importance.

Children can be interested in real literature much earlier than has ordinarily been supposed. It has been noticed, for instance, that children who had been in school but for two years, on the day when they were permitted to read aloud from a favorite library book, read much more readily, and with better expression, than from the regular reader of the grade. Then why not always read from a favorite library book? Where this hint has been acted upon, the reading hour, too often a period of tediousness and somnolence, has been made the most delightful of the day. To have read a book, a whole book, is a matter of pride to the little child; while this forever beginning and never finishing, after the fashion of the school reader, is disheartening. The school reader has its place, but there is no longer any excuse for confining the children to this scrappy mental and moral bill of fare. The difficulty is not now in finding material, but in making a wise selection from the abundance offered.

Childhood has been the discovery of this generation. We are beginning to try to find out what children enjoy. Instead of suppressing their boundless energy, we are making use of it in the direction of their education. We are training them more through their interests and on lines of least resistance. The old attitude in its extreme form is illustrated by the mother who inquires: "Where is Willie?" "He is in the yard." "Go and see what he is doing and tell him to stop." Children are educated through the things they like to do as well as by wholesome restraint and the doing of the necessary but irksome things. Children like to read interesting books. When they ask for bread, why give them a stone?

What a field for the study of childhood the library offers to the teacher! If teachers would know children, let them know the literature that children love, and, through this knowledge and the sympathy and insight thus acquired, quadruple their power. Whoever would teach literature must love literature. More important than any other qualification—except the indispensable one of maintaining order—is the power of inspiring interest. This depends not on clearness, not on method, but on feeling interest ourselves.

The scope of this department, as defined at Buffalo, is a broad one; nothing less than all questions that pertain to literature and reading.

I quote from the Buffalo statement: "Its field should cover fully school and pedagogic libraries, but its great work should be the practical recognition that education is no longer for youth and for a limited course in a school to which they give most of their time, but that it is really a matter for adults as well as youth, for life and not for the course, to be carried on at home, as well as in the schools, and to be taken up in the hours or minutes of leisure as the proper accompaniment of their regular business or labor. This means that education must be carried on by means of reading, and that, if the libraries are to furnish the books and give all necessary help in their proper field, the schools must furnish the readers."

THE TRAINING OF TEACHERS SO THAT THEY MAY CO-OPERATE WITH LIBRARIANS.

BY MAE E. SCHREIBER, TEACHER OF LITERATURE, MILWAUKEE
NORMAL SCHOOL.

Today there is a growing sense of the importance of reading, and what it ought to do for the reader. Such men as Mabie, Scudder, and Warner are writing on the relation of literature to life, in the newspapers and periodicals the question is discussed, and in the educational magazines the values of literature in a course of study are pointed out and extolled. The trend of the best thought is that literature is another chapter in the revelation of life, and that it ought to make for the life and character of the individual. This growing conviction of the importance of reading in the education of the child creates a new demand upon the schools and the libraries. The schools and libraries must so work together that the child acquires the habit of reading and a taste for good reading. It demands of the schools that literature be made a part of the course of study in every grade, and it holds the teacher responsible for carrying on the work in such a way that the child gets the most and best

out of his reading. In his recent book Charles D. Warner, speaking of the reading in the common schools, says: "Taste for good literature is not developed; the habit of continuous pursuit of a subject, with the comprehension of its relations, is not acquired, and no conception is gained of the entirety of literature or its importance to human life." And a careful examination of conditions and results, as they exist in the schools and communities, convinces us Warner is right. How can it be otherwise when, in the majority of schools, literature, if it is included in the course of study at all, is relegated to the higher grades and studied from a textbook, and the stuff called literature is simply a mass of names, titles, lives of authors, and what some one else has said about this or that piece of literature—when the little reading there is consists in critical analyses of a few pieces of literature? Turn to the educational magazines (as every good teacher does) and read the lesson plans in literature which she carries out in her work. What fine lessons in language they are! The meaning of every word is traced even to its derivation. Every figure is labeled, number of feet in a line counted, and the divine music of "The Brook," "The Skylark," and "The Cloud" destroyed by putting them into the language of the child. What lessons in science, geography, and history are those poems, into which the poet has poured his life and passion! In this process of vivisection what has become of the life and the spirit? Is it any wonder that the result of such a process is to fill the child's mind with a disgust for literature? That it becomes a thing apart from his life, since it has no message or meaning for him? The teacher is a teacher of words and parsing, and not an interpreter of the sure things of heaven and earth.

It is not an easy matter to teach from the standpoint of life; it demands a broad and generous culture on the part of the teacher, and it demands a careful study of the child and his interests; it demands work with the individual. Unlike other studies, literature cannot be graded and marked, and it does not lend itself to examinations. The teacher cannot mark off the heart beats; he cannot measure the tear which starts to the eye in sympathy, and he cannot grade the glow in the cheek, the flash in the eye, and the ring which comes in the voice of the child as he tells of his joy in some heroic deed.

The importance of the subject, the difficulties which present themselves in carrying on the work, necessitate better training of the teachers, and it is the duty of the normal schools to furnish this training. The Milwaukee Normal School presents a course called literature and library reading, designed to train teachers to carry on this work in the common schools. In this course we aim, not only to give the student teacher the uplift, the power, and the mental training which come from reading, but we aim to teach him how to read, to form the habit of reading, and to

give him special training in carrying on the reading in the grades. The student teacher reads the literature, not *about* literature. His interests underlie the whole work and determine what he shall read. Starting with present interests, narrow in range, the effort throughout the entire work is to widen these interests and through them to create new ones. The student reads from the standpoint of his own life, the reading is made a revelation of life, and lessons in courage, devotion, love, and self-sacrifice are made to touch the responsive chords in his nature, as he comes into touch with the great realities of life through his reading. The work in literature and library reading is divided into four parts: (1) literature, in which the student learns how to read; (2) library reading, or reading in various lines, in which the student puts into practice what he has learned in literature, extends his knowledge of books, and gets into touch with the world by reading what the world reads; (3) juvenile literature and methods, in which the student reads children's books and determines their values, studies principles and methods, and puts them into practice in the grades; (4) library work, in which the student becomes acquainted with some of the practical workings of a library.

LITERATURE.

The work in literature aims especially to teach students how to read. Fiction, poetry, and essays are read. In reading fiction, if the interest centers in the plot, the student's attention is given to that. How has the author handled the plot? What is the center of interest in the plot? Dramatic situations are noted. If the interest centers in the life portrayed in the novel, he studies that. He looks at the characters as types of that life. He notes their dress and appearances. He goes with them to their homes and with them to their amusements. Occupations, religion, and literature are examined. That is, the life portrayed is made as real as possible to the student, and he studies it as he would study real life. Again, if the interest in the novel is of character and character development, he studies character as he would study it in life. In character development the student traces the changes which take place in the character and tries to find out what has brought about these changes. Take "Silas Marner," for example. The aim is to make Silas Marner a real character and to help the students to see the moral truth underlying the novel. They are asked to trace the changes which take place in his character; to note the relations between his character and his appearance; to find out what has brought about these changes. The relations of Silas Marner with the community are dwelt upon. The students sympathize with his loneliness and his sorrows; they love Eppie for the good she does; they hate the irresolution of Gregory and the wickedness of Dunstan; they laugh and gossip with the village folk at the inn, and they

rejoice over the redemption of Silas Marner. After living thus with Silas Marner, how can they help but see that, if a man loves that which is ignoble, he will become ignoble, and how can they help but feel the wonderful power of human love and sympathy?

In reading poetry, the student reads for those things which are the essentials of poetry—beauty, music, imagination, passion, insight, and faith. He reads by authors—that is, the student spends a time with the authors' works as a whole; listening to the pulse of the music, until he knows the singer's song; looking at the beautiful descriptions, until he sees them as pictures; looks to see what is in the pictures, and how they are painted, until he knows what the poet loves best to paint, what he paints best, and how he paints. The student imagines with the poet and feels with him in his passion, until he has caught some of that passion and fire. He tries to see God, nature, and humanity as the poet does, thus making his own in some degree the insight and faith of the poet. Essays the student reads for thought, not critical analysis, but analysis of thought. He reads the essays over to get the main thoughts and the subordinate ones. He thinks with the author by seeing the relations of these ideas. He knits the new knowledge thus gained to what he already knows.

The literary merit of the different forms of literature is considered here, again, from the student's standpoint. The author's manner of thinking and writing is considered and compared with that of other authors which he has read. Like forms of composition are compared. And the work is considered in its trueness to the best in life. Lastly, the student compares his judgments with that of others, as found in newspapers, periodicals, and books of criticism. The work is individual, and in the recitations it rarely happens that more than three or four are reading the same author, or that any two are reading the same book. The student selects his book from carefully prepared lists, the teacher aiming to guide his choice through his interests without dictating it.

LIBRARY READING.

In addition to the regular work in literature, each student reads systematically throughout his entire course of two or three years, where the method of reading learned in literature is put into practice in a cursory way. Lines of reading in literature, history, biography, economics, sociology, science, pedagogy, ethics, art, and current events are offered, from which the student selects. This does not mean a certain line of reading, and a certain number of books per term. The student begins anywhere and reads what he is interested in, but it is the aim of the teacher to study his interests and so to guide his choice through his interests that his reading is broad and well balanced. After the selections are

made, the school is divided into groups of from ten to twelve students. Each group is made up of students who select the same line of reading, but so closely are interests followed that it often happens that by the end of ten weeks each student is interested in a different line of reading. Every ten weeks a readjustment of groups takes place. These groups meet the teacher once a week to report informally upon their reading since the last meeting. These reports are in no sense book reviews or criticisms; they are rather spontaneous conferences about the reading. There is no set work to turn the reading of the book into a task. The student tells what he has found interesting and good, and the students talk over the books as people in life discuss books. In these discussions the teacher seeks to discover interests, and by her contributions and questions to direct interest in new lines, and to suggest books in these lines. Library reading in the grades is carried on in essentially the same way, with such adaptations of subjects and ways of reading as the child's interests, mental development, outlook on life, and his needs require.

Each student is furnished with a library card, on which he records his reading. The title of the book, the author, and the time spent with the book are given, and usually a brief suggestion about the book as to its interest, value, or the field covered by the book. The cards are filed in the literature department, and the teacher can tell at any time what a student has read. As the children advance from grade to grade, they take their cards with them, and a complete record is kept of their reading from year to year. It is found that the student spends, on an average, an hour a day in this reading; when the amount drops below that, it is because the book is uninteresting. The study of interests and the creation of new interests is the most important phase of the work. The interests which are developed out of old interests, the interests which make a student read a book because some one else has read it, the interests started in other lines of work, the interests which grow out of events happening around the child, as well as those unexplainable interests, are all utilized, and, so far as possible, met with a book. A child was very much interested in the story of King Arthur by Frost. He came back for "another book about a knight." The story of Siegfried was given him. In talking with the teacher about knights and their doings, the teacher told him about King Richard, the Lion-hearted. The boy immediately wanted a book which would tell him more about Richard, and "Ivanhoe" was pronounced the "best book I ever read." After reading the "Talisman" the crusades became the interest, and thus the way was opened for a line of historical reading. Soon after the talk over "Ivanhoe" the teacher found a little girl in the fifth grade reading "Ivanhoe." It was so far away from what she had been interested in that the teacher asked: "Why are you reading that?" "Oh, you and Fred seemed to think it was such a good book, I

thought I'd read it too." After that "Ivanhoe," King Richard, knights, tournaments, Saxons and Normans were the rage for some time in that department. This same girl read "Seven Little Sisters." The story of "Little Agoonack, the Eskimo," proved the most interesting. "Little Children of the Cold" was next selected by her. Then followed Mrs. Peary's "Arctic Journal," and the cold countries were pronounced the most interesting places in the world, and now the child is an authority in that department of arctic life.

The student is prepared to carry on literature and reading in the grades in what is known as

JUVENILE LITERATURE.

In this work the educational values of literature are discussed; the purposes, character, and scope of the work considered. Principles underlying the instruction in literature, and methods based upon those principles, are discussed. Modifications in the presentation of work to the children, and in methods, because of varying conditions, are considered. Children and their interests are studied. Observation and experimental work are carried on in the grades, and methods, theorized over, are tested by actual practice. Children's books in various lines are read, and their interests and values determined, and lesson plans on certain books for different grades made out.

LIBRARY PRACTICE.

Each student in his senior year takes charge of the library for a few days, issuing books to the children, helping new students to find books, unfolding the mysteries of the card index to the juniors, and keeping the room and books in order. Thus do they come to know something of the system of cataloguing books, the card index, the arrangement of books on the shelves, and other details of carrying on a library.

Students have entire charge of the magazines, issuing them, taking care of back numbers, and, in order to help them understand what an index ought to tell, they index for use in various departments the articles in the current magazines. To give skill in handling books and in finding things in books, references on various subjects are listed, and the lists used by different departments in their regular class work.

The student teacher who completes this course knows how to read, has read a number of books in various lines, including children's books, and is familiar with the outside of many more. Two years of continuous reading have done much toward forming a habit of reading. She has some definite ideas as to the purposes, plans, and ways of carrying on the work. And her face is turned in the right direction if through her reading and her study of the child she sees life — its needs, its possibilities,

and its aspirations—with clearer vision, and ever-growing horizon; and if she has learned the keen delight, the gracious, ennobling influence, and the divine inspiration which lie in literature for her and her children.

DISCUSSION.

W. R. EASTMAN.—I would be very glad if Miss Schreiber would say something in reference to the point whether this scheme of the normal school can be used to advantage in the ordinary school.

MISS SCHREIBER.—Of course, you cannot carry on any reading unless you have some books; but the work has been carried on in Fond du Lac and in Sheboygan, in this state, by students who have gone out from this school. In both of these places the work has been successful. I have some reports which were made out by the children in Sheboygan. The girls tell me they have difficulty in getting books; that they could do more and better work if they had books; they do all sorts of things to get money to get books, and they borrow books. The interesting thing to me is that the children are reading, and, above all, that they are reading in the right way.

MISS A. V. MILNER.—I should like to ask Miss Schreiber what effect it has upon the library to turn the students into it.

MISS SCHREIBER.—We are unfortunate in that we have no regular librarian to give out the books. The books are taken care of by a member of the faculty. The students go in and take books and charge them to themselves. The books do get off from the shelves, but the students take pride in keeping them in place. They have been in there one or two days and seen how those things work; and they are, I think, a little more careful to put the book back in its place.

W. R. EASTMAN.—Does your work cover with definiteness a well-considered range of literature?

MISS SCHREIBER.—If I understand the question, it covers all literature. In literature we begin with modern literature, because that is the literature that is part of the student's life. That is where his interests are, and we believe, if we make a reader of him, he will read classical literature after a while. From the literature standpoint we get a classical literature in this way: For instance, last quarter a young girl read "Quo Vadis;" she was interested in the life portrayed, and, talking over the novel with her, I asked her: "Would you like to read the novel which would tell you the life from the standpoint of the Christian?" And I told her of the book "Darkness and Dawn," by Canon F. W. Farrar. Then the question came: "Is this novel true to life?" I said: "Why don't you read Tacitus and find out?" She read Tacitus. Another young girl went through about the same process, and, after she read Tacitus, she read Suetonius; now the young lady is reading the classics, in translation, of course.

We read German literature in German. We have a class reading Latin literature in Latin.

SOME OBSERVATIONS ON CHILDREN'S READING.

BY ROYAL W. BULLOCK, UNIVERSITY OF COLORADO.

In September, 1896, the department of pedagogy in the University of Colorado, under Dr. James E. Russell, began a study of the subject of adolescence, not in a physiological way, but in its bearing on psychological development. Finding but little material that was serviceable for such a study, the department issued a very comprehensive syllabus, copies of which were distributed to persons in all parts of the country who are interested in child study, asking them to give in detail an anonymous answer to the 120 questions of the syllabus, concerning their own personal experience during the adolescent period. In nearly every instance the answer emphasized the influence of reading upon their mental development at this time of life.

Acting on this suggestion, the department issued a second syllabus, asking fifteen questions relating entirely to reading. Four thousand copies of this syllabus were placed in the hands of the school children of ten of the cities and towns of Colorado, and they were asked to answer the following questions: State your sex, age, grade, school, and town. Give the titles of all books, not connected with your school work, that you have read since the beginning of the school year (a period of six months). Where do you generally get your books? What is the most interesting book you have ever read? What book or books have you found most helpful? What book or books have you found most harmful? What magazines and papers do you read most regularly? Please underscore those that are taken in your family. How many short stories, on an average, do you read each week? Underscore the kinds of stories in the following list that you like best: stories of adventure, of travel, of great men, of great women, love stories, ghost stories, detective stories, and war stories. Do you discuss what you read with anyone? With whom?

As a student of pedagogy in the university it has been my privilege to study and use the material thus collected, under the direction of Dr. Russell, and upon it this paper is based.

All of the papers were studied *en masse* for general impressions, and two thousand of them were classified, tabulated, and averaged for accurate results. Of these fifteen hundred were taken from North Denver, Boulder, and Colorado Springs. As these are the only towns from which complete reports, from the third to the twelfth grade inclusive, were received, our figures and charts represent the reports of these towns only. We are able to represent by figures the amount of reading done, the

sources of books, and the general preferences of pupils for various classes of reading. Other observations will be made, not as a matter of statistics, but as conditions which seem to be indicated at the present stage of our study. It should be borne in mind, also, that this is but the beginning of an investigation from which we hope to get more definite results as we progress.

TABLE SHOWING THE AMOUNT OF READING DONE BY PUPILS OF NORTH DENVER, BOULDER, AND COLORADO SPRINGS.

Grade	Average Age	Average number of books read in six months										Average number of short stories read per week				
		Boys					Girls					Boys and Girls				
		North Denver	Boulder	Colorado Springs	Average	North Denver	Boulder	Colorado Springs	Average	North Denver	Boulder	Colorado Springs	Average			
Third.	10.2	4.9	5.1	3.2	4.4	5.2	6.	3.4	4.8	1.	0	5.4	2.1			
Fourth.	11.	3.6	3.2	3.3	3.4	4.5	4.2	3.5	4.1	2.4	0	2.5	1.6			
Fifth.	12.3	3.7	2.5	4.2	3.5	5.5	3.8	5.4	4.9	3.8	4.8	5.8	4.8			
Sixth.	13.	4.2	2.	3.7	3.3	6.8	2.4	4.4	4.5	7.9	4.6	6.4	6.3			
Seventh.	14.1	6.5	3.	5.	4.8	6.8	5.1	5.8	5.9	11.9	6.2	4.9	7.7			
Eighth.	15.1	5.	4.9	4.6	4.8	5.5	3.6	5.8	5.	5.	7.1	1.9	4.7			
Ninth.	15.9	3.5	2.9	5.	3.8	4.	1.9	4.2	3.4	6.6	4.1	5.2	5.3			
Tenth.	17.5	2.1	2.8	4.2	3.	4.3	3.	3.4	3.6	4.8	4.	3.4	4.1			
Eleventh. ..	17.8	3.4	2.3	4.	3.2	4.8	2.5	4.3	3.9	4.4	3.3	4.4	4.			
Twelfth. ...	18.7	3.	4.	2.3	3.1	3.8	4.2	1.9	3.3	2.6	2.6	1.7	2.3			

As to the quantity of reading, referring to the above table and taking Denver for example, we find that boys of the third grade are reading an average of 4.9 books in six months; that the average falls to 3.6 in the fourth and fifth grades, rises to a maximum of 6.5 in the seventh grade, then drops quite regularly to 3 in the twelfth grade at the end of the high-school course. The same, in general, is true of Colorado Springs the third-grade boys beginning with an average of 3.2 books in six months, rising to a maximum of 5 in the seventh grade, and dropping gradually to 2.3 in the twelfth grade. In Boulder the one marked variation is that the maximum amount of reading occurs in the eighth grade rather than the seventh, a fact that seems to be in part accounted for by the inferior library facilities of Boulder as compared with Denver and Colorado Springs.

Comparing with this the record of reading done by the girls, we notice that, grade for grade, the girls read more than the boys, that, as a rule, they reach their maximum a year sooner than the boys, and that from a general maximum of 5.9 books there is a drop to 3.3 at the end of the course.

The table representing the number of short stories read per week indicates the same tendencies. Averaging boys and girls together, we see that third-grade pupils read 2.1 stories per week, seventh-grade pupils 7.7 per week, and twelfth-grade 2.3 per week.

The principal sources of the books which the children read are school libraries, public libraries, Sunday-school libraries, the home, and borrowing. Their use of public and school libraries is shown in percentages in the following table:

TABLE SHOWING IN PERCENTAGES THE USE OF PUBLIC AND SCHOOL LIBRARIES BY PUPILS IN NORTH DENVER, BOULDER, AND COLORADO SPRINGS.

Grade	North Denver		Boulder		Colorado Springs	
	Public Library	School Library	Public Library	School Library	Public Library	School Library
Third.....	0	92	0	95	5	43
Fourth.....	5	79	20	12	3	43
Fifth.....	13	58	17	8	5	51
Sixth.....	19	62	18	11	24	8
Seventh.....	55	33	11	21	28	15
Eighth.....	42	42	27	0	43	11
Ninth.....	53	22	4	27	37	7
Tenth.....	70	5	7	39	41	25
Eleventh.....	47	14	0	64	22	25
Twelfth.....	60	12	4	33	24	11

Taking Denver again, we see that 92 per cent. of the third-grade pupils use the school library and none the public libraries. In the fourth grade, however, 5 per cent. begin using the public libraries, and that percentage gradually increases to 60 per cent. in the twelfth grade, while the percentage of those using the school libraries decreases to 12 per cent. in the twelfth grade.

In Boulder, which has modest school libraries and a small free-reading-room library, 95 per cent. of the pupils in the third grade use the school library, or books furnished at school by the teacher, but only a comparatively small percentage through the rest of the grades find their books at school. Averaging pupils of all grades, only 9 per cent. in Boulder use the few books of the free reading room.

In Colorado Springs, which has good public and school libraries, 19 per cent., on an average, use the public libraries and 20 per cent. the school libraries. Colorado Springs, however, seems exceptionally well provided with private libraries, 36 per cent. of the pupils getting their books at home.

TABLE SHOWING IN PERCENTAGES THE PREFERENCES OF PUPILS FOR EIGHT CLASSES OF STORIES.

BOYS.

Grade.....	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth
Stories of adventure.....	40	62	67	87	91	94	95	79	68	53
Stories of travel.....	33	56	47	55	60	64	72	68	66	48
Stories of great men.....	47	60	48	52	54	63	70	50	53	58
Stories of great women ..	25	20	12	15	20	17	22	14	8	16
Love stories.....	11	18	15	16	19	20	21	35	35	22
Ghost stories.....	35	33	18	32	13	10	14	4	7	4
Detective stories.....	30	37	34	64	45	45	28	15	13	8
War stories.....	87	71	75	82	82	86	84	75	73	48

GIRLS.

Grade.....	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth
Stories of adventure.....	34	42	60	80	75	70	65	60	59	38
Stories of travel.....	23	56	46	60	46	62	52	57	60	42
Stories of great men.....	41	45	39	56	38	57	48	56	43	48
Stories of great women.....	20	43	35	46	48	58	52	70	58	57
Love stories.....	26	31	36	38	50	47	48	56	67	75
Ghost stories.....	36	31	33	41	30	15	19	21	7	24
Detective stories.....	5	9	25	20	32	12	21	21	18	5
War stories.....	21	46	40	55	48	46	35	38	44	27

The above tables, showing the percentage of pupils that expressed a preference for each of the eight representative classes of stories, while not a final test, are at least suggestive. Fairy stories and historical novels should have been added to the list, and were omitted only because, when the syllabus was printed, it was not proposed to distribute it among either the lower or higher grades, but simply the sixth, seventh, and eighth. The taste of the boys differs somewhat from that of the girls, hence they are shown separately.

War stories seem popular with third-grade boys, and that liking remains well marked through the sixth, seventh, and eighth grades. Perhaps this fact offers a suggestion as to the best time for teaching history, though history, indeed, should not be confined to the accounts of bloody wars. Stories of adventure are popular with the boys all through the heroic period, reaching their maximum in the eighth and ninth grades. The liking for biography and travel or exploration grows gradually to a climax in the ninth grade and remains well up throughout the

course. The tender sentiment has little charm for the average grade boy, and only in the high-school course does he acknowledge any considerable use of love stories. In the sixth grade he is fond of detective stories, but they lose their charm for him as he grows older.

Stories of adventure are popular with the girls, too, in the sixth grade, and stories of travel are always enjoyed. The girl likes biography, but in the high school, true to her sex, she prefers stories of great women rather than great men. Pity it is that the biographies of so few of the world's many great women are written. The taste for love stories increases steadily to the end of the high-school course. Beyond that we have no records.

Such are the conclusions at which we arrive from a statistical study of the reports. The observations which we shall make may seem less authoritative than the figures, but we give them as our convictions at this stage of the investigation.

The maximum amount of reading is done in every instance between the sixth and eighth grades, the average being in the seventh grade, at an average age of 14.1 years, or near the advent of the adolescent period. Knowing this, we are not surprised to find that the girls reach their maximum in each individual school a year earlier than do the boys. It may be worthy of notice that several high-school pupils wrote: "We have no time to read books not connected with our school work." The maximum reading of short stories is also done in the seventh grade, but while, as an average, this occurs at the same time as the maximum reading of books, yet the individual pupil who reads an unusual number of short stories seldom reads many books. There is probably no question as to which is more profitable, the books or the stories.

Concerning the sources of books, the figures submitted do not indicate the most significant fact, namely, that good library facilities influence the quality of reading much more than they do the quantity. In Georgetown, for example, which has almost no library facilities and where 65 per cent. of the pupils "borrow" their books, almost as much reading is done as in Colorado Springs, but the quality is very inferior. To take a concrete illustration: A seventh-grade Leadville boy, who borrows his books, submits the following list as read: "Peck's Bad Boy," "Diamond Dick," "Buffalo Bill," "Jesse James," and "Wandering Billy." Or this one, of a twelve-year-old Grand Junction girl, who "gets her books at home," and has read "The Outlaw's Bride," "Against Fate," "The Beautiful Wretch," "What Love Will Do," "Mona's Choice," "One Life One Love," and eight more similar ones. These are extreme cases, but they show the tendency. Judging from the reports of the children themselves, I have no hesitation in saying that the best class of reading for children is furnished by the school library, and after that

the public library, home library, and Sunday-school library, in the order named. I can also say that of the schools from which we have reports none show so uniformly a good quality of reading, and such evidence of general efficiency of the library, as does North Denver under a system of room libraries.

This leads us to notice again the table of preference, which impresses us with the fact that when 95 per cent. of the boys prefer adventure or 75 per cent. of the girls prefer love stories, that is just what they are going to read, and the duty, for the time, of the teacher or librarian is to see that they get adventure and love, pure and true to life, rather than some namby-pamby substitute for adventure or a false and vicious misrepresentation of the soul's deepest emotion.

Another fact that appears strongly in the individual papers, though it is lost in the general average, is that during the period of maximum reading they read, as one boy expressed it and as his paper showed, "everything they can lay hands on," but this is the formative period, and before the end of the high-school course they have settled down pretty definitely to one class of reading, whatever that may be.

The lists of periodicals taken in the home show that some attention is needed along this line. A superabundance of daily papers or light-story papers is the rule, and a carefully selected list of real newspapers and standard magazines is exceptional. The report of a sixteen-year-old girl in Pueblo will illustrate the point. She says: "I have read only the *New York Weekly* and the *Fireside Companion*," and those are the only papers marked as taken in the home. To the questions which follow, the same girl answers: "The most interesting books I have ever read are 'East Lynne' and 'Repented at Leisure.'" The most helpful? "I really haven't found any of them very helpful." The most harmful? "There are very few books that harm me." Yea, verily, very few.

The testimony of the pupils as to what books are helpful or harmful is usually very wisely given. Those pronounced helpful are such as the most careful librarian would select, and those denounced as harmful show that above the fifth grade the average pupil knows full well what had better be left unread. Some are even so conservative as to declare against "The Arabian Nights" and "The Scarlet Letter." Occasionally some facetious answer would be given. Various high-school girls named the dictionary, the cookbook, and the pocketbook as most helpful, and one boy asserted that Cæsar's "Gallic War" was the most harmful book and a translation thereof the most helpful. But such answers were few, and more often would be found replies like that of a sixteen-year-old philosopher, who said: "I think that almost any book, rightly read, may be helpful."

To a body of librarians probably general facts and figures are more

interesting than are details, but to the student of psychology the individual papers are of far greater moment. The librarian might be interested in the fact that 75 per cent. of the pupils discuss their reading with someone, for by discussion the reading of books, either good or bad, is promoted, but the psychologist values more highly answers to the question, "With whom do you discuss your reading?" A fourth-grade girl answers, "The short stories I tell my little brothers and sisters, and the long ones I tell to my papa when he isn't feeling well." Compare with that the reply of a fifteen-year-old boy, who says: "No one. Mother says, 'Keep it to yourself, it is not interesting to me.'" Two pictures we have of home life and its influence on character. In answer to the same question a high-school girl says, "With the gentlemen who visit the house and a young man of eighteen says, "With my sweetheart and my sweetheart's mother." Here is emphasized another factor which may not be ignored in studying the motives of conduct in pupils of the public schools.

Objections may be urged to the manner in which this study has been conducted and to some of the observations presented. Granted. The methods are somewhat faulty, and no one has reached ultimate truth. We can only say that in common with all who, having assumed the great responsibility of training immortal souls, feel the need of a more thorough knowledge of the material with which they work, we have been working in one way toward such knowledge. We believe that from our study thus far we have obtained some clearer notions of child life and the forces that shape and mold its destiny. If any such have been imparted by the room paper, its mission is fulfilled.

ROOM LIBRARIES.

BY MILLICENT KALTENBACH, NORTH DENVER, COLO.

To endeavor to set forth the merits and advantages of the "room library" in so many words is a task both difficult and unsatisfactory. Actual experience in its use is necessary for due appreciation.

As it is yet in "embryo," the good results are not so apparent as they will be in the course of a few years, when the heightened appreciation of that which is good in literature can be traced to the source of its cultivation, the room library.

On this subject teachers of experience become enthusiastic, and one opinion prevails as to what these books are doing towards cultivating taste, as well as increasing the *quantity* of matter read. Their influence

extends beyond the schoolroom into the home, as is shown by numerous requests for renewal of books to enable parents to read them.

The third- or fourth-grade "storybook" serves frequently to awaken interest among the older members of a family. This being accomplished the "public library" becomes to them more than a "name."

Can other than good result from this daily contact with a library containing carefully selected books, which often, in the guise of a "storybook," present dry text-book facts in such a way as to arrest the attention and ultimately awaken the interest of the most indifferent pupil?

The hours pupils are compelled to spend in the schoolroom are considered tedious, if less of the routine work is required, and they are permitted to grow and expand by means of the numerous books satisfying their varied tastes, and conveniently close at hand.

A common complaint from pupils old enough to recognize the practice done them is that to their parents anything not bearing the name of "text-book" is a "storybook," and, as such, a waste of time. As they are lavish with *study hours*, these same parents will do all in their power to repress this desire for reading, by imposing unnecessary tasks. When lessons are finished and there is a tendency to indulge in *reading*.

Just here the "room library" affords those children an opportunity to satisfy their desires by furnishing them during school hours with story- or reference books, either of which will do much toward broadening their ideas.

We are all acquainted with the bright, restless pupil, who, even if he does not even give you the satisfaction of finding fault with his recitation, is always able to say *something* on *any subject*, although not actually studying, at least not during school hours. Excite his interest in library books by giving him an opportunity to tell in class what he has found on a certain subject, and suggest certain books you have found in the room. His surplus energy being spent in this way, if you have disciplined him without destroying his restlessness. On the contrary, his success in the quest places him on a higher plane. In addition, you have been spared an unsatisfactory argument. If ever, leads to the end of all discipline, *i. e.*, the formal method.

Throughout the lower grades much of the interest in reading is dependent on the teacher. The reading of a few books which you particularly desire the children to read will generate interest, to say nothing of the encouragement given by the teacher to talk during school hours about the characters in the stories.

It is encouraging to note the influence the well-read pupil has on his fellow-pupils, both in and out of school, as they discuss the themes for conversation at any and all times. The

average pupil, influenced by the brighter ones, acquires a taste for reading and research. This becomes second nature to him on leaving the grades, and serves to connect him with the public libraries, even though following some humdrum occupation, which would ordinarily have a narrowing effect.

Again, when the pupil is required to get material from other than the text-book, for composition or recitation work, how often does he resort to the hackneyed excuse that "the book was not in the public library when he wanted it"! Such a thing is probable, and the teacher is bound to accept it, but too often is it the excuse of the indifferent pupil, who had made little or no effort. How different it is when the room library contains the books needed, and the teacher is able to note what effort has been made on the part of the pupil!

As an incentive to procure cards for the public libraries there can be no question of the influence of the room library. Where 5 per cent. of the pupils who entered eighth grade possessed cards before room libraries were instituted, now the reverse is true, and 95 per cent. possess them. Their recitations are so much facilitated by use of the public-library books that others hasten to procure cards in order not to be considered stupid.

It would seem that the ladder by which the pupils rise in the estimation of their fellow-pupils has for its rungs library cards. To feel assured that it is not merely an unhealthy desire to own *cards* and to be surrounded by countless books, the teacher questions about the contents, and rarely, if ever, does she find a book carelessly read, while she has yet to find the pupil whose sole desire is to possess books whose bright covers are their only recommendation. I venture to say that those in charge of the public libraries find school children better able to select books than formerly, and that the storybooks are not the only books appreciated by pupils in the grades.

The reference books selected for the various grades are such as refer pupils to higher, broader authority. Should they desire to search further, what more natural than to procure needed books from the public libraries?

In this way these libraries are made a part of each grade in the public schools rather than "something *apart*," to be used after entering the high school.

To give an idea of the extent and character of the libraries in the part of Denver referred to by the preceding speaker, I would say that each room, beginning with the third grade, has its own permanent collection of books, the selections being based on the needs of the pupils in the different grades; the number of books varying from some forty volumes in the lowest grade to eighty or one hundred volumes in seventh or eighth grades, additions being made from time to time, as suitable books are found.

In third grade, storybooks, including fairy tales, fables, and attractive nature stories, abound. By the teacher's skillful handling, simple poems in "nature" found in this library are made interesting. Pupils in the lower grades are encouraged to make use of the books while in the schoolroom as well as at home, thereby enabling the teacher to observe individual tastes and direct them in the proper channels.

Fourth-grade books permit the pupil to indulge his taste in similar lines, with the addition of readable history stories. In the fifth grade we find volumes of poetry, including Bryant, Holmes, Longfellow, Lowell, Tennyson, and Whittier, and it is not uncommon to see pupils read with all absorbing interest the standard poems. The parents marvel at such appreciation of poetry, and in some cases are generous enough to admit that it is due to the superior equipment of the schoolroom and the teacher's guidance, rather than to look upon their children as prodigies.

Sixth-grade books give scope for indulgence in somewhat the same lines, with the addition of books of travel. Biographical stories of great interest find an important place on the shelves, also. In seventh grade, pupils have a greater variety of books, as well as a larger number. The books are such as will satisfy the taste for fiction, history, science, etc., and the work in the schoolroom being such as will call for thorough reading. In the eighth grade, if more of these lines, their presence alone insures their use.

Investigations seem to show that at this age pupils read independently, and the use of the room library under the teacher's guidance does much toward overcoming depraved tastes.

The eighth-grade library shows a decrease in the number of books, not because they are less popular, but the pupil's taste has been cultivated to such an extent that he can be trusted to make his own selections, and the public libraries furnish him with all he needs. The shelves in this grade are filled with the best of reference books, and are in constant use as the grade work demands. Research has been shown that the pupil is not satisfied with one author, and has formerly the case, before the taste for research was cultivated.

It is gratifying to note the originality displayed when pupils consult these different authorities and drawn comparisons. The originality in literature can be of a relatively advanced nature, as the taste of the pupils has been cultivated in the lower grades. The originality displayed in the study of standard poems is in marked contrast to the blank look which greeted the teacher in former years was mentioned. The moral bearing is not the least of the value of the room library. Each pupil feels the responsibility of keeping the room presentable, and the books in good condition; while the use of a book means a reflection on the honor of the room as well as of the individual, so that even the light-fingered pupil

sacred. The circulation of these books need impose no extra work on the teacher. On inquiring into devices used, we find them as numerous as the teachers, and characterized by extreme simplicity, while systematic enough to guard against loss. In most rooms pupils act as librarians.

*THE MORAL AND LITERARY RESPONSIBILITY OF
LIBRARIANS IN SELECTING BOOKS FOR
A PUBLIC LIBRARY.*

BY PROFESSOR RICHARD JONES, LITERATURE INSPECTOR, UNIVERSITY OF
THE STATE OF NEW YORK.

[STENOGRAPHIC REPORT.]

Does the librarian have any responsibility for the choice of books? I believe Dr. Poole takes the ground that he has no responsibility; that he should give the public the kind of books the public wants. This position is taken by some librarians. The other position, taken by the librarian at Allegheny City, is that the librarian is responsible, not only for the moral quality of the books, but for their literary quality as well. He excludes many books, not because they are vicious, but because they are not literature. He says they do not do any harm, except that they take up the time of the reader. And you recall that Ruskin says: "You must remember, if you read this, you cannot read that." Matthew Arnold says: "The good is the enemy of the best." This is a very important question, and will come into prominence more and more as libraries are established — as it becomes recognized that it is the duty and the function of the city to establish libraries at public expense. The question will come up more and more: What right has the librarian to say we shall not have the books we want — in libraries supported by public taxation? The library movement is comparatively recent. In previous years we have not thought it the duty of the state to provide libraries. Our conceptions as to what the function of the state is are undergoing great modification. Little by little we find the state assuming functions formerly supposed to belong to private individuals and private initiative. In the Old World the state is supposed to furnish recreation for the people. But literature is one of the fine arts, and libraries should be classed with royal museums and art galleries and royal theaters and all forms of art supported by the public. And what is true of other forms of art and their control and direction ought to be true of libraries. I had the fortune to live for a number of months in Dresden, where the music is supported by the state. The deficit of the Royal Opera House is made up by the state.

The newspapers frequently contained warnings to the director that he should not cater too much to popular taste; that he should maintain high standard of art; that he should not, for the sake of full house, lower the standard of the music. The same thing was true when I lived in Munich. Continually those men are warned that they must keep standard up. Now, what is the significance of that? My idea is—perhaps I am entirely wrong, but my argument is based upon this belief that to attain civilization is a struggle, and to acquire and retain state of civilization costs great effort; that the natural man is no less of a savage; that, if we are going to have a highly civilized society, we must make an effort to keep the standards up; not in literature, but in music as well. You know classical music is not a taste for what is called classical music must be cultivated. The man prefers a more simple and less musical form of music—folk-music, it may be. The taste for every one of the forms of art is cultivated. If I am wrong in this idea, my whole argument is on wrong ground. The average man needs to be reminded continually that to have the highest possible form of civilization, we must struggle to keep it up. I remember the first time I ever saw a potter at work that to make pottery is an art. I had read, of course, in literature classes Longfellow's poem "Keramos," but it did not mean much to me; but when I stood for the first time in a great museum and saw the product of the potter's art, then I realized for the first time that to develop which men have given their lives. Longfellow, in the poem "Keramos," speaks of him:

A madman, as the people say, who breaks his tables and his chairs to pieces.
Nor cares who is unfed if they are fed, nor who may live if they are

Now, we do not appreciate, I think—when we buy and decorate our homes—we do not appreciate the fact that when there was no such ware, and that a man gave that art. I think that many a community does not appreciate that they sing in worship, and that the books they read, which they preach, came from older communities and that some great struggle upon the part of some great genius.

As the poet has said: "We are the heirs of all the ages, the whole heritage of ours, this civilization, is the result of the struggle of all the ages." When people say that the great public do not like literature, they like this other sort of literature, and that is the literature of the day—it seems to me that is giving up the whole thing. People must be taught to like that which is worth reading at all. I, as inspector of literature, will not make any particular difference whether they read or not.

valuable. I should prefer my boys should not read at all than to read some of the books which have been mentioned by the gentleman from Colorado. I should prefer that they would never open a book than to read those books. There are, of course, grades of excellence; and what has been said, and so well said, I agree with heartily — that we must consider the tastes and aptitudes of pupils at various ages, and give them the kinds of literature which they want; but give them as good literature as they will read. But to consider that, because they won't read good literature, we must give them, at public expense, that which is inferior, that which belittles them, I think it is entirely wrong. What is the basis of the public library? The soundest basis is that it is a part of the educational system of the state. I think it is not a part of the function of the state to provide mere amusement. I should approve most heartily of supporting a high order of music in a town, provided we could arrange it that the best of music would be given. I should say it would make a town much more attractive to have the highest form of music maintained at public expense. I should approve of maintaining an art gallery; I should approve of maintaining various forms of art. I believe it is part of the function of the state to maintain a library. But if the library is not an educational institution, and if the boys and girls are not to be made better by it, then I don't believe in the public library at all. I should say that the library has no right to buy ordinary, cheap, flashy literature; which is not literature, in the first place, and which, if not unmoral, is negative in its morality.

Then, to conclude, it seems to me the librarian in Allegheny City was entirely right in the position which he took. Perhaps he was a little unfortunate in giving expression to some reflections upon some of the authors whose books he excluded. He didn't personally express any opinion, but he quoted some opinions which were rather severe, and some who had in their youth read those books were offended by the remarks quoted by the librarian. But the principle, I believe, is sound. I cannot believe that the librarian is merely to register the wishes of the boys who want "Buffalo Bill" or "Peck's Bad Boy," or the books of this class with which the press is swarming. The duty of the librarian is to elevate the standard of taste in a town. His function is an educational function. He represents among books what the director of music represents in great opera houses. He is to elevate as rapidly as possible the standard of taste of the town.

I should make, therefore, the words of our great leader, our commissioner of education—I should make his words the motto for the librarians. You remember he has said that "it is through literature that the genius of the race, appearing in exceptional individuals, instructs the multitude, educates man's insight into the distinction of good from evil,

reveals to him his ideals of what ought to be, and elevates the banner of his march toward the beautiful good and the beautiful true."

DISCUSSION.

JOHN W. COOK, Normal, Ill. — I wish to speak from personal experience, and you may draw your own conclusions.

When about seven or eight years of age, I began to read certain books and papers, and I continued to read them for six or eight years. I read "Sixteen String Jack" and "Dick Turpin," and all of those English books, biographies of highwaymen, and quite innumerable books and story papers of similar character. Some of them I now think of as bad; many of them were very mild and inoffensive; and by degrees I was lifted out of that kind of literature by coming in contact with Dickens. But I am obliged to confess that I am not sorry that I read that miserable stuff. I am glad I read it. I do not mean to say that, if I had my life to live over again, in choosing between good books and bad, I would choose these books; but, having no choice, I am thankful that I read all those books and papers instead of reading nothing.

F. A. HUTCHINS. — There are two things that connect themselves in the two papers that I should like to bring together at this time. I believe it would be entirely unnecessary for boys to read the class of books that have been lately mentioned, if we had sufficient material drawn from the study of the preferences of the children in Colorado, as is shown in those tables of Mr. Bullock. The taste for adventure is a natural taste. The boy comes to these stories of "Jesse James" and similar stories because he wants stories of adventure, not because he wants the filth that those stories contain. Take the adventures of Paul Jones, Francis Marion, Daniel Boone, Kit Carson, as a basis — there is no history that is richer in romantic episodes than American history, and we ought to be using it. The boy of thirteen or fourteen years of age wants stories of men — men who have done something in the world; he admires them, and wants to follow in their footsteps. He has studied men — individual men. The next thing he wants is to know the times of those men. To study man is history. And the boy who has had the right kind of material in the lower grades will come to Fiske and Parkman without being told.

LOUIS H. GALBREATH, Normal, Ill. — I believe we ought to honor the library as an educational institution. I believe we ought to guide the reading of the child. Now, while I think we ought to press along that line which Dr. Jones has given, I also believe in what is implied in Dr. Cook's speech. It is true that we cannot get children to read on the highest plane. They have tastes of their own, and it is true that they read along the line of their tastes. But the question is slightly different from that. They will read along the line of their ability to get hold of books. The question arises whether we shall use, as a principle of selection, the one Dr. Jones has given us or the one Dr. Cook has implied in his speech. I think we must emphasize largely the principle of Dr. Jones, but, on the other hand, we must be in sympathy with the other kind of work. We must not condemn the boy who is reading those books, as we might condemn a boy who was smoking cigarettes. Let him see that we are in sympathy with him and lead him step by step to something higher. But shall we use the library to that end? I am inclined to think not. For I think that a boy who wants to read that kind of literature will get hold of a great deal of it.

I believe the representation given in the first paper for normal schools is almost ideal. I liked particularly one point, in which Miss Schreiber emphasizes the necessity of getting the student teacher to work along with the child. What is the classic reading for a boy or girl? What is classic for the adult is not classic for the little child. If Dr. Jones means that we should select what the adult thinks is classic, it is a mistake. The problem for us, as teachers and librarians, is, what is classic for the children of the fourth, fifth, sixth, or seventh grades? It is proper for us to find out what children will read with interest, what they will read through preference, and what is of the highest value to the child of a given age. In thus finding out what is classic, we will be able, it seems to me, to work in accord with both principles—the principle which Dr. Jones sets forth, and also, to some extent, that which was implied in the illustration given by Dr. Cook.

MR. BARHOUR, Rockford, Ill.—We cannot always say what a community must read; we have to take it where we find it. A rudder is of no value to a ship until you get the ship in motion. You cannot cultivate the taste of a community until you get it to reading.

I might give you a history of that department of the work in our town. When our library was first organized, fiction was about 80 per cent. of all our reading. Last year our report showed that fiction was 59 per cent. We have made no noise about the matter, but the library board, in connection with the librarian, has gradually withdrawn the lighter class of books which the people read when our library was first organized, and has supplied its place with a better and higher class of literature. The boys and girls who come to our library today do not ask for the material the boys and girls did twenty years ago. It is not there. They know comparatively little about it. They do call for and secure and read the higher and better class of fictitious literature. I am in accord with the statement Dr. Jones made, as a theory, that perhaps it is better for them not to read at all than to read a certain class of books. Practically, I think it is not the best way. We must get them to reading before we can direct them. After we get them to reading, we can exercise a supervision over what they read, and supply its place with a better class of literature.

DR. JONES.—Perhaps I should repeat what I thought I said, that I believe we ought to find, by such methods as have been suggested to us this afternoon, what the tastes of boys and girls are, and then, as this gentleman has said here, give them the best literature along those lines. I do not mean to say that we should set up an ideal standard and compel all children to read the books we approve, or none at all. We should recognize a children's standard. As to what my friend, Dr. Cook, says, I have always had a great admiration for his mental ability, more so because I believe he has done as well as he has, not because of the literature he read, but in spite of it.

The state of New York, as you know, furnishes traveling libraries. The state supplies these libraries to any community that wants them, on any subject that they call for. Any individual, under proper restrictions, can get any single book in the extension library. Now, suppose they send for "Trilby," or "Tess," and then "Jude, the Obscure," and "Sorrows of Satan," and then want some more of this decadent literature. My position is this, that the state has no right to buy at public expense those books and send them out through the state. Now, I appeal to you if this is not the right position.

A. W. RANKIN, of Minnesota.—I have an intense interest in seeing the public-school teachers fall into line with the librarians in this work. I think the methods of teaching reading in the schools are such as positively injure the work of the librarians, if their standards are as high as those set by Dr. Jones. We have scrap books for readers. The children pore over them day after day for four or five years. And by that time, if they have any reading tendencies at all, they are bound to find some such books as the

good Doctor and myself found in our youth. I think there should be a reform in the teaching of reading. First, there should be a table consecrated to the work of reading, and on it there should be the best books the community can afford and can donate to the school. Second, the reading class in reciting should partake more of the nature of a reading circle. It should not be the old stereotyped plan of teaching the children the mechanics of reading. From the first primary grade it should aim to teach children how to find out something. In the third place, I would have a large supply of books given to the primary grades. I have noticed the process through which two small girls learned to read. I have in my library hundreds of books. The two children have spoiled those books, but they have learned to read them. I have seen a little girl of six going out to play with Longfellow's poems under her arm, and in the intervals of play she was reading "Hiawatha."

MR. YUST, of The University of Chicago.—It seems to me in this question of the public library we must bear in mind that it is not for children only, but for all the people, old as well as young. The function of the library is no longer the conservation of knowledge, but rather the dissemination of knowledge, making it more an educational force and factor. Of course, there are, at the present time, certain libraries that should take practically all books. Otherwise, how is the library going to perform its function, which we should not lose sight of, the conservation of knowledge, the preservation of books? Otherwise, how in future times are we going to get a proper idea of the time? How should we know what were the ideals or the defects of society in the times of the Greeks and Romans, if we did not have the lower Greek comedies, if we did not have the satires of Juvenal? So, it seems to me, there are some libraries, like the British Museum, the National Library of Paris, that should take in all books; not for general circulation. Now, how shall we keep the child from getting these books? There comes a time when he should have access to these books in order to form his own opinion. Now, the teachers co-operate with the librarian in Evanston on a plan by which the teachers supervise the reading of the children. In that way the pupil is given certain books at a certain age, and afterward given more books. And by and by he is given books that in the first stage of his reading would have been harmful. It seems to me that here we should try to harmonize these interests, and adopt some plan suitable for the various schools and grades.

E. A. JONES, of Ohio.—When the lady from Denver was outlining the plan in one of the Denver schools, I think she said they had twenty books in one grade, and so on, up to eighty volumes in the eighth grade, as a room library. It seemed to me it would be of great interest to all teachers to know the names of these volumes supplied to pupils in the third year and fourth year, etc. This matter of pupils' reading is one of great interest to teachers and great importance to the state. There is no question about that. And one of the greatest difficulties in the way, it seems to me, is in the fact (I believe it is a fact) that the average teacher is not familiar with the best books. I asked a little while ago the question if in Colorado they had a pupils' reading course. If they have one, it has had a great influence in the results as manifested upon those charts. We had a reading course a number of years ago, and I know, if those questions were submitted to the children in our state, we should get very different results from those we should have had four years ago, before that course was adopted. And it seems to me this section could not do a more important or practical work than to suggest this list of books that would be the best books, or as nearly as possible the best books, for the third, fourth, and fifth years. That, it seems to me, is a practical line of work, of great importance.

C. C. ROUNDS, New York, N. Y.—I went through an experience like Brother Cook's, and I read it until I got sick of the whole infernal stuff; and I wish I had not read more

than half of it, even if I had gone fishing the rest of the time. We speak of exciting an interest in order to get children to read. I asked a little girl one day why she was reading a certain book. She said: "I want to find out what it says." Stevenson tells us of a Welsh blacksmith, twenty-five years of age, unable to read, who heard a chapter of "Robinson Crusoe." He learned to read Welsh, in order to read the book; and then he could not find the book in Welsh. Then he learned to read English. A gentleman told me of this case: A sailor went on a long voyage in command of a ship. You know the commander of a ship on a long voyage leads a very lonely life. The only book there was on this ship was a copy of Shelley's poems. When that sailor reached London again, he was a cultivated gentleman; the last time my friend saw him he had every aspect of a cultivated gentleman.

What we read gives us our thoughts. The time lost reading bad books cannot be made up. There is so much that is beautiful and inspiring in literature that we cannot afford to waste our time on books that are not of the best. I know a little boy who, last October, began to learn to read. The other morning, in Chicago, he read us the news in the Chicago *Tribune*. He has a library and has made a classification of literature. He divides all books into two classes: real books and made-up books. Most fairy stories he doesn't like; Russian fairy stories he likes pretty well. One point I urge; I know it to be essential. We don't take pains enough to show our pupils the beauty of English style. I tried it with a grammar school; taking a recess quietly, I picked up a volume of De Quincey and read quietly to myself. The pupils were still in five minutes and came about my desk to listen. If you show children the beauty of perfect English speech, you have done more than anything else to free them from the baneful style of these objectionable authors. Children appreciate the things that are lovely and of good report, if you put them before them.

Now, if I could not get my food except by having the whole corn ground up, cob and all, I would take it that way. But I would rather have the regulation johnny-cake. I am glad I learned to read young. I exhausted the whole country side to find reading; some was good and some bad. Perhaps at that time it was the best thing that could be done; but I have suffered all my life because nothing better could be done. My children did not have to go over that road, Brother Cook, which I traveled over from sheer hunger, and at fifteen years of age they had a better knowledge of literature than I had ten years later than that.

The cultivating influence of the right book makes it important that the right book be selected; and I believe it important that the child be led along in the line of thought that will give a desire for that book. What we want to guard against is that which is vicious directly and that which is vicious in suggestion. The London librarian, Mudie, found it necessary to buy two thousand copies of Marie Corelli's last book. It is a sad state of affairs when Mudie has to do that. The patchiness of reading and the badness of a great deal of it make it important to be able to cull out what is good, that children may not start in the wrong direction.

CHARLES R. VANDERVOORT, Peoria, Ill.—It is my good fortune, perhaps, to be a member of the library board of a library of about 60,000 volumes. And the matter of the responsibility of the directors in supplying books for the public has disturbed us a great deal. I am glad to have heard these discussions. I think I can go home better prepared to exercise the functions of a library director. It was my good fortune, also, to attend the meeting of the American Library Association. I have just come from Philadelphia here. There was great interest in the meetings of this section of the National Educational Association. The American Library Association is twenty-one years of age this year, and I heard a great many prominent librarians express themselves as very glad of this organization and very sorry that they could not attend—the president and vice-

president, and quite a number of others. A great many of our teachers have not on their tongue's end the names of books suitable for children of any given age. I was very glad to hear Miss Eastman, assistant librarian at Cleveland, say that they are getting up a catalogue that is made by the pupils themselves. The teachers have a set of questions, which they give to the pupils, about the books they have read, and their opinion of them; and those are collated and classified and turned over to the librarians.

J. W. COOK.—I supposed my remarks would attract some attention and criticism. Please note what I said. I did not say I was glad I had read those books; I said I was glad I had read them instead of reading nothing.

Now, we are what we are as civilized beings through education chiefly. And I would not abate a whit the force of heredity. The natural man is not only at enmity with God, but with his fellow-men and civilization in general. The habit of reading has to be acquired. It is an art. We do not take to it naturally, as a duck to water. It is acquired by practice, constant repetition. We cannot oblige people to read. It is like the matter of drinking. You can provide the water for the horse, but you can't make him drink. So much in regard to this habit. Now, it seems to me the moral of my own experience is this, that the tastes of children must be consulted; and, if the child is so organized that it must be something that is lurid, why, then the best lurid thing must be put in his neighborhood. Get him to read. If you can't get him to read what is best, for heaven's sake, get him to read something. I believe the books so full of adventure and mawkish sentimentality touch a responsive sentiment. If I had been asked at the time I was reading about Claude Duval and Dick Turpin what profession I would select, I believe I should have said I would be a highwayman. But I think I should have been a very tender-hearted highwayman under the tuition of Claude Duval. I think these stories are in a way the Odyssey stories of our time; and that is what makes those stories so attractive. But we must come to the child and reach him where he lives, and induce him to read in that particular world in which he is interested; and then follow him up, week after week and month after month, until after a time, perhaps, he will say, as Brother Rounds said a few minutes ago, that he regrets those things and wishes he had devoted his time to better purposes. But if we have to give them this very pronounced literature, we will start them on that and keep the matter in our own hands, and get them to read the better books as we can.

MISS A. V. MILNER.—A little boy in the school where Dr. Cook and I both are came to me one day, and he said: "Is 'Huckleberry Finn' in?" It was out. "Is 'Kit Carson' in?" "I am sorry," I said, "but we haven't got 'Kit Carson.'" "Well, have you got 'Jesse James,' or any of those books?" I said: "We have not. But you come with me, and I will find you something." He has been in the library ever since. The other day he came to me and said: "Won't you please come and find me a book? I can't tell very well myself; something with adventure in; I suppose it has to have a little history."

HOW TO MAKE SURE OF GOOD BOOKS IN OUR LIBRARIES.

BY W. R. EASTMAN, LIBRARY INSPECTOR, UNIVERSITY OF THE STATE
OF NEW YORK.

The true public library contains material for the education of the people. During the years of school life the young are being trained to

use this material. They are made acquainted with books. They are taught to read and think and search, and when school days are over their education is fairly begun. If they have been well trained and inspired, as they can be inspired, they will carry it on for themselves, provided the material is furnished, and I think we shall all agree that the community is as much bound to supply the means of this wider, lifelong development as to provide the public school.

What we call education usually begins with the doing of required tasks. But real education must have the element of freedom and delight in the task. The character of the boy is determined by what he loves to do. The class-room puts him under obligation; the library offers him opportunity. He needs the influence of both. But the opportunity is to last long after the obligation has ceased. It is, therefore, a vital matter that the books shall be wisely chosen. If they have no power to attract, or, if attracting, they fail to instruct or help or inspire, the charm of the library is departed.

The supply is plentiful. In 1896 there were 5,189 new books published in the United States, of which 1,012 were classed as fiction. In 1895 there were 5,101, of which 1,050 were fiction. In England the yearly output was somewhat larger. In France it was more than twice as great. With this excessive supply we can well afford to pass by every doubtful book. Libraries are usually limited in means to buy, and must be all the more careful on that account to use only the best. The books we want are in the market, but it is a serious problem to find them.

1. From the library point of view we need, first of all, to fix the responsibility for the selection of books. It rests with the board of trustees or committee that controls the library. They may delegate their power to the librarian, the teacher, or to a subcommittee of their own number, but they are bound to know that this librarian or teacher fully deserves their confidence, and they must themselves remain responsible to the community that put the library under their control.

There are trustees who shirk this duty altogether and offer to buy any book that anybody wants; a course that will soon be found to be fatally extravagant, absurd, and unfair. Some will buy at haphazard, each one of the board picking up now and then a package of new books, as they attract attention. Some buy the books that are most talked about, because people ask for them, and so the strangest, most romantic, or most audacious books keep up an excited interest in the library and work insidious mischief. Some are so anxious to fill their shelves at the least expenditure that they spend their time hunting for bargains at the second-hand stores. With care they can undoubtedly obtain some choice works of standard literature, but the result lacks freshness, timeliness, and attractive power. They get what others have thrown aside, and their

patrons feel that it is an inferior, second-hand provision, while the literary world about them is full of what is new. For all this the board of control is responsible.

2. The second important point is to have a distinct idea of the difference between a good book and a bad one. To some it is a mere matter of taste. One book pleases them and another does not. One falls in with their own way of looking at things, and the other goes right against their cherished views of life, morals, or politics. But the wise judge of books is acting in the public interest and cannot allow himself to be swayed by personal prejudice. A book may be a very good book and valuable to the community even if he does not enjoy reading it.

The library has no right to set itself up as a censor of public morals, forbidding men to read anything. But since it has important functions to discharge toward the public, it is bound to choose those books best suited to its purpose, and must understand that purpose clearly and adapt the means to the end.

There are some accepted standards of right and wrong, and everyone will admit that a book as well as a man, in order to be admitted into good society, must be at least honest, truthful, pure-minded, and considerate of others; and, in order to be respected, it must have some seriousness of purpose. A man may be a genial companion, a good story-teller, enjoy a laugh and a frolic with the children now and then, and still retain your respect. But if he is a confirmed trifler, a clown, and nothing else, or if he uses the language of the slums, you will not choose him for the companion of your children. Silliness or weakness or lack of purpose or morbid sentimentalism will rule out a book when we have serious business on hand. Any book that makes it seem profitable or pleasant to do wrong, that leaves a reader weaker or worse than when he began, is a bad book. The good book makes its appeal to the higher nature, informs the mind, strengthens the moral fiber, suggests better possibilities. If you read a book for information, it should be substantially and honestly accurate and clear in style. If you read for recreation, the story or the fun should be true to life, wholesome and clean, and, moreover, well expressed, in good, honest English, without exaggeration or bombast. If you read for inspiration, it should be a book that opens lines of intellectual, moral, or spiritual enlargement, a sort of "window" book, out of which you may gain broad views of life and its opportunities. Such are good books.

Another point must be considered. A book may be good in itself, true, accurate, clear, and inspiring to some readers, and yet not be at all adapted to the particular place to be filled. Libraries differ greatly, and the interests of each constituency must be kept in view. Libraries are large and small. They are in city and in country. Some are for working

people, some for common schools, some for advanced scholars. The good book is the book that meets the need of that place and those readers at that time; and of this no one is qualified to judge who is not familiar with the conditions. With the best intentions it is not easy to apply the test.

I will not stop here to speak of editions, paper, type, binding, etc., though these, too, are essential to the goodness of a book.

3. My third point is that in the selection of books the library needs the assistance of an expert. This is a person of intelligence and judgment, who has for years cultivated an acquaintance with literature. His eye running down a long list of books is among acquaintances. He knows the old authors at a glance, and can soon take the measure of new aspirants for favor. Publishers, too, have to his mind their own distinct reputation for issuing books of a certain order of excellence, so that the imprint is the best introduction. The expert also has the library sense strongly developed. He knows what is expected of these books, and, as a skilled workman, he picks his tools for use. Every week the list of new books is studied. For the ordinary library he does not want the law books, the medical or theological books, the various technical treatises, or the cheaper, paper-covered books. About one in five may be marked for more careful consideration. This proportion will give about 1,000 American books in the year. It will not be difficult, on second thought, and by the exercise of a cultivated critical sense, still further to reduce this number by one-half. Then the real task of systematic examination begins. The reviews must be studied and indexed. If he is so happy as to be permitted to handle the volumes themselves, he can often make a shrewd guess at the library value of a new book in a few minutes, taking note of its points as a horseman judges a horse. But many of the books must be actually read, and the work can no longer be done single-handed. It will be seen, however, that the expert can render essential service, and that, in order to be sure of good books, each library should have its own expert, its trained librarian, or, perhaps, one of its trustees who will cultivate this ready skill, assiduously and systematically, year by year. We must, every one of us, learn to be experts. If but fifty books or twenty books are added in the year, so much the greater is the need of the wisest selection.

4. Librarians, teachers, and trustees, whether experts or not, need to know the book which is put into the hands of a reader. They need to know more than they can learn by their unaided efforts. This knowledge can be gained only by the labor of many. Much of this labor will be lost unless organized and its results secured and made available. But it is easy to see that there is a work here which could be done if the right steps were taken, and that information about books, both new and old,

could be gathered which would be of unspeakable value to libraries and their patrons.

It is not so easy to say who shall be elected to carry on this labor of exploration, nor in what way the due rewards of service shall be rendered, for it will cost money. There are, at least, three essentials of success: (1) admitted ability on the part of the critic; (2) absolute impartiality, and (3) sufficient compensation.

It is, perhaps, conceivable that the work might be organized as a business. A body of expert critics might be secured, each of whom, by long experience, would be able to touch the vital points of the new book in his own department and promptly write a note that would describe that book to the perplexed librarian. Every quarter, or every month, these notes could be gathered and distributed to subscribers. Whether such an enterprise could be made to pay is doubtful. And, when we consider the business interests affected by such a publication of opinion, it is also a question whether a private enterprise could permanently retain public confidence in its absolute impartiality.

Again, the work might be organized by representative bodies of librarians or teachers. As, for instance, this department of the National Educational Association might appoint, here and now, a committee to obtain and report information about books suitable for school libraries. It might secure ability and impartiality, leaving the matter of expense to be provided for. This department might, I think very properly, take action in this direction by the appointment of a standing committee on books, to which should be referred all suggestions on this vital subject, with power to prepare lists or to approve in its own discretion such lists as may be presented to it from any source. A judicious committee on books might be of great service. The American Library Association has, for some years, had its publishing section, which has, from time to time, issued partial lists of the desired character, such as "Sargent's Reading for the Young" and the lists of "Books for Clubs of Girls and Women," which have proved to be of great value, although, in the nature of the case, not kept up to date. There is also the catalogue of 5,000 volumes exhibited as a model library at the World's Fair in 1893, and published by the United States Bureau of Education, for which the American Library Association is responsible.

But the organized department of criticism, for which we are seeking, can be maintained to the best advantage by the state or national government. This ought at once to secure ability, impartiality, and support. We have long had at Washington a library of Congress. It has now the best library building in the world, and I trust we are soon to have in it a truly national library. Two copies of every copyrighted American book are placed there by law. Is it too much to ask from that library a monthly

bulletin of information in certain lines about some selected books, suited for school and village libraries, a publication which shall be of such a high character as to command the respect of the educational world?

But, while waiting for this, each state department of education, each state library commission, can be actively at work in aiding the choice of books. In Wisconsin, and some other states, the state superintendent is required by law to publish annual or biennial lists. If these departments and commissions in the several states were in regular communication, they might greatly aid one another by division of the labor of examination or by handling each other's lists in advance of publication, with the privilege of using the best. This should be done, not in the spirit of competition, but with the feeling that they achieve the highest triumph whose word is most widely copied, because most worthy of trust.'

There is still a serious difficulty to be met in regard to the question of time. With our present facilities it is impossible to obtain descriptions such as are desired in time for the practical guidance of libraries where there is a strong demand for new books. This difficulty can be overcome only by securing from the publishers the use of advance sheets.

Permit me, in closing, to outline the plans of the University of the State of New York to aid the choice of books. This university, it should be said, is not a teaching, but a supervisory institution. The state library is under its care, and the services of trained experts on the staff are at its disposal. Six hundred secondary schools, 175 libraries, besides 100 colleges and technical schools, are under supervision. The law authorizes anyone interested to apply to the state library for advice in selecting books or on any other library question. An occasional list of \$500 worth of books recommended for secondary schools is published, being carefully selected, classified, and annotated. In the past four years thirty annotated lists of traveling libraries have been issued, including 2,000 titles, besides a few special-subject lists. In connection with the extension department, libraries have been furnished to lecturers and study clubs, and these special lists, some in print, some in manuscript, may be obtained on application. At the close of each year a list of 300, 400, or 500 books of the year, selected with the aid of experts outside the state library, has been submitted to the librarians of the state and some others, with an invitation to mark fifty books best suited for a village library, and send back the list. The returns have been summarized and the list printed a second time in the order indicated by the number of votes for each book. This problem has led many a librarian to a more careful scrutiny of the quality of books.

The state also offers to school and public libraries a bounty on the buying of approved books by duplicating the money so used. Of course, there are conditions and limits set for the enjoyment of this privilege.

Approval involves the tedious examination of long lists submitted, and often the ungracious duty of rejecting some books must be faced, with the corresponding disappointment of the library. But it tends to secure much more careful selection and a gradual raising of the standard. State aid for excellence means greater care to use only the best. Even local subsidies paid by cities to libraries open to the public are also dependent by law on state approval of their circulation, and limited in amount by the limit of approval.

To make sure of good books in libraries we need : (1) responsibility ; (2) a clear conception of what is good ; (3) expert help, and (4) information.

Lists are needed, but mere lists are not enough. There must be reasons for each choice, and, with all the reasons before them, the local boards of control are responsible to their own constituencies for the result. Eternal vigilance is the price of success, and we must help one another to watch.

THE RELATION OF THE LIBRARY TO ART EDUCATION IN THE SCHOOLS.

BY WM. H. SMILEY, PRINCIPAL HIGH SCHOOL DISTRICT NO. 1,
DENVER, COLO.

The movement by which art education in this country came to be considered a legitimate part of public education began, if I remember rightly, in Massachusetts, some twenty-five years ago, under the direction of Walter Smith, and it has always seemed to me unfortunate that he advocated its introduction almost entirely from the industrial point of view. At that time it was hoped and expected, as I think some will remember, that through the teaching of design in the schools, when the practice should become general, the artistic quality of American manufactured goods would be speedily raised. In consequence, the drawing exhibits of those early days were very largely handed over to the would-be designer of prints, wall papers, and book covers. The unfortunate result has been that the desire to defend the introduction of drawing in the schools from this practical standpoint has served to keep from view certain fields of work of vastly more importance to general culture, and in which there is large room for helpful co-operation on the part of libraries. It seems to me that, in order to secure the best results from art education, we should invite other forms of instruction that belong just as closely to art education and are very likely more prolific of results than even draw-

ing itself. In fact, the helpfulness of the library to such work depends in no small degree upon the view taken of the fundamental purpose of art instruction.

Let us admit, once for all, that we do not teach design to make designers, or drawing to make artists ; no more than we teach arithmetic to make bookkeepers or engineers. It is, however, the educator's duty to be able to show in what respect the mass of pupils have gained enough from any subject to justify its forming a part of the public-school curriculum. Now, I firmly believe that, unless we can justify art instruction on the ground of securing cultivated power of vision and sensibility of taste, and, furthermore, appreciative joy in the objective world because of such power, then we can hardly make a valid plea for its retention in old places or its adoption in new. Therefore, drawing teachers should insist, in season and out of season, that their pupils are learning to see, rather than to draw, to measure relative size, relative gradation of tone in all its compass from white to black, to see masses as the artist sees them, to select for expression characteristic details as the artist selects them. If such be the purpose of instruction, power of appreciation will far outstrip manual execution ; but appreciation of skillful execution will keep even pace with appreciating power of vision. That trained sight is far less common than it ought to be is the testimony of all experts in whose calling such power of vision is a necessity. I recently heard a bitter complaint from an editor of the incapacity of young reporters to see in relative proportion of importance the details of the commonest incident, to say nothing of reporting them truthfully. From the naturalist, from the novelist, from the corrector of college themes and high-school compositions, we hear the same complaint. Can we doubt, then, the necessity of teaching intelligent seeing ?

Landscape in its bolder form and larger masses is in truth loved by our people ; witness their passion for public parks, for seashore and mountain scenery, for the striking glories of sunrise and sunset ; but we greatly need to be taught to look for refinements of form and of color. In illustration of my meaning let me say that nothing in nature is more conspicuous than the varying curvature with which the tree masses of various species outline against the sky ; nothing is more effectively used by the landscape artist in his composition ; yet the ordinary observer passes striking illustrations of it in almost absolute unconsciousness ; few ever note in masses of foliage the grays or blues reflected from the sky ; and I have noted the look of startled wonder with which students, when the fact was called to their attention for the first time, noted the vivid blue of shadows cast on snow.

In the modeling and color work of the kindergarten, and in the elementary grades, nature study is doing much to cultivate such refine-

ment of sense-perception as I have suggested, and such work is quite as deserving of the name of art instruction as the actual drawing which we first think of under this term. But our chief consideration is to find out what the library also can do to cultivate refined taste among teachers and pupils; how it can supplement the department of drawing, if there be one; how it can do something to make good such deficiency, if it exist. My first suggestion is that the relation of the library to teacher and student requires that it be an inviting place, a place that from its decoration and its arrangement shall, in both form and color, give pleasure to the artistic sense. However humble its collections, every library should indicate an affectionate desire to house worthily its treasures of literary beauty. The Boston Library has set an example destined to bear fruit in numberless places. In every library let something be done; but, whether much or little, let it be done in the spirit that is everywhere apparent about the marvelous building referred to; where all is done with deliberate purpose of feeding the eye upon artistic loveliness. It does not need money to accomplish this, so much as it needs great thought, great care, and the best artistic advice within reach. So, again I repeat, from the tinting of the walls to the framing of the inexpensive prints that may adorn them, let everything show simplicity and unity of artistic purpose. The library in most communities is the only public organization that can naturally assume to itself the guidance by example of the artistic feeling of the community. In most communities the library should say to itself: "My duty is the curatorship for this community of all products of artistic expression; not simply of the artist as he speaks through the printed page in poem and novel, but of that artist as well who reveals his thought to men, it may be through the sculptured figure, the shapely vase, the painting." Therefore, I affirm again that on entering any library, however small, it should be evident at once that its governing board recognizes this duty to the community in the expenditure of some portion of its funds. It need be very little. A Japanese flower vase of exquisite shape and color, to be used daily to display the beauty of a single spray of blossoms, as nature exhibits them, not as we see them in the vulgar masses of the florist's window; half a dozen Japanese color prints; a few photographs correctly framed or matted; merely these may be enough for a beginning. Let the source, cost, and, if possible, the reason for the choice of each article be neatly indicated on cards of uniform shape and size, that the imitative instinct of the library users may readily profit from such casual suggestions. No minutiae of this kind are too slight to be attended to carefully. Teachers often fail to attempt any schoolroom decoration simply because of a lack of knowledge of just such mechanical details. As in most schoolrooms wall space is lacking for any kind of picture display, libraries should keep conspicuously

in view a light wooden screen covered with burlap, either plain in color or of some fine shade, in which this material is now so extensively used for draperies. Such a screen is an invaluable and effective piece of decoration, if kept constantly hung with the effective prints that appear with almost every issue of the illustrated journals. A library attendant told me not long since that she could make a reading demand for almost any book by simply suggesting its title to two or three readers over the counter; that the increase in demand was almost in geometrical ratio. I feel sure that similar results can be accomplished through teachers in the use of illustrative material in the schoolroom.

But the great work of the library will be done in bringing to the notice of teachers the masters of illustration in the literature of childhood. How many have ever stopped to think of the incalculable evil done in vitiating the taste of children through cheap picturebooks, grotesque in color and design, such as are sold by the ton at the holiday season? Cheap reproductive processes have improved their artistic quality immensely in the past five years, but still the best work—work where the personality of the artist may outweigh his text even one hundred to one, as do Caldecott's illustrations in his "Sing a Song for Sixpence"—reaches but few children, and is comparatively unknown to teachers. Now, I feel sure that a high level of artistic sensibility may be secured in most children between the ages of five and ten by their becoming perfectly familiar with a few such books as I have in mind. The child's sense is so impressionable, his eye memory so keen, that I believe we have little conception of what a field for genuine culture we have left neglected in the masterpieces of illustrated literature for children. Children are veritably greedy for vivid pictures of adventurous life and dramatic or humorous incident. In our public library is a juvenile room, containing some two thousand volumes, from which the young people may make their own selections; take the books from the shelves and handle them at will. One morning last week I visited the room, hoping to find Jessup's "Misadventures at Margate" or his "Jack of Rheims," or something from Caldecott. Though I found neither, I found good evidence in an odd volume of Mark Twain's "Huckleberry Finn," illustrated by Kemble, that illustration of the very best was keenly loved by the users of that room. It had been rebound, and was now past the possibility of repair; but whether pictures or print, every one of its dirty, dog-eared, thumb-tracked pages had been preserved with what seemed like religious veneration. Place the work of such artists as Caldecott, Jessup, Crane, and Howard Pyle in the hands of your pupils, and you will always find them winning affectionate regard, with a correspondingly wholesome effect upon their taste.

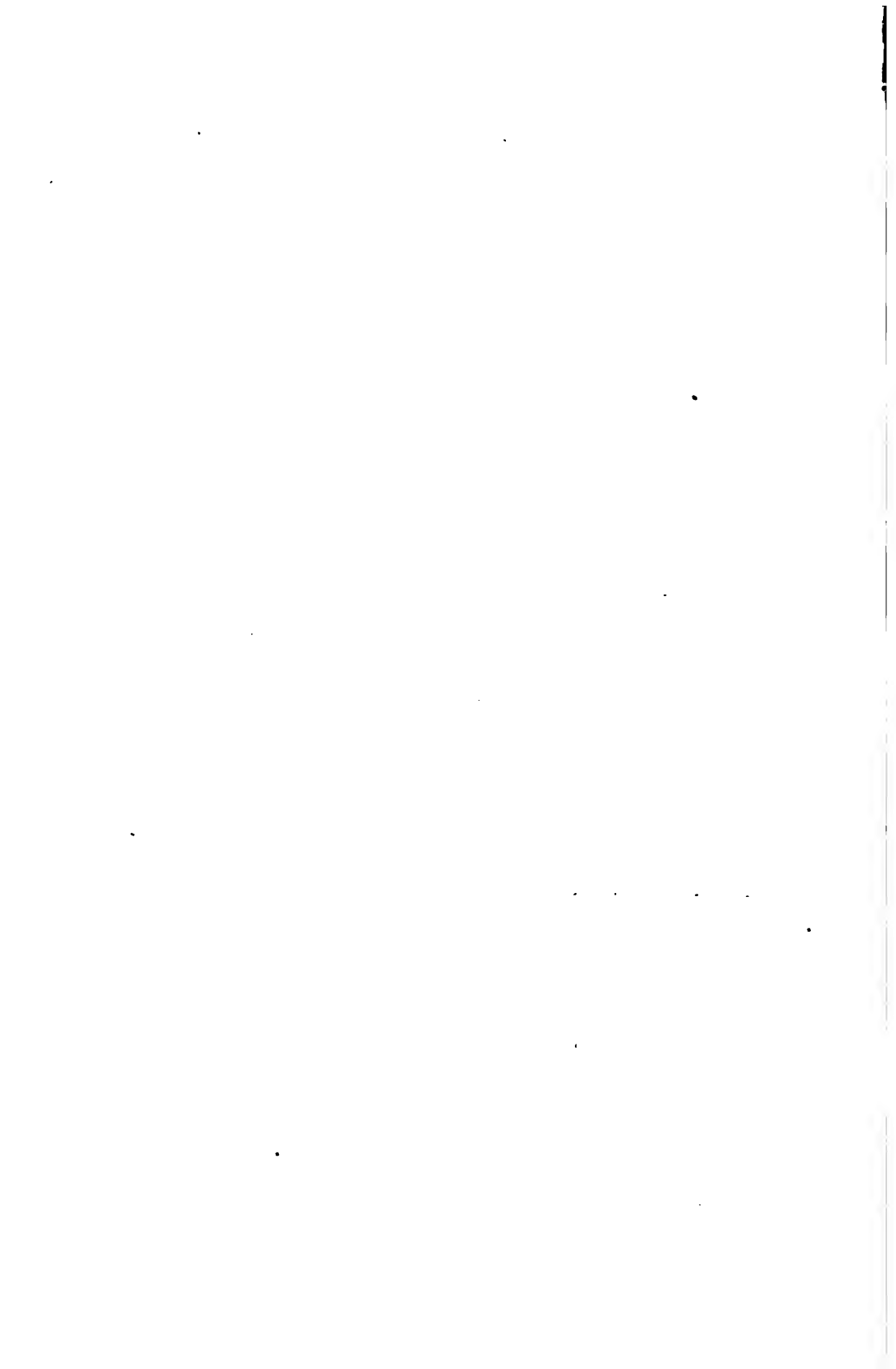
How little credit has in the past been given the artist for his work is

shown by the fact that the work of the artist is uncatalogued in the library. Sargent and Abbey, whose work for the Boston Library ranks them with the greatest of the great, have no place, for their own sake, on library cards. The teacher who is interested in securing such work will find difficulty in discovering it, unless she knows the name of the author for whom they work. It would be of great assistance, therefore, if the libraries would issue special lists of illustrators and their works, and if such works were reserved in a conspicuous place, for teachers' use, until they become familiar. They are unlikely to reach the schoolroom in any other way, but once let their humanistic effect be felt there, and they will never be found absent.

The library should keep at hand all catalogues of artistic reproductions, whether prints, casts, or photographs. It should bring to the notice of teachers collections of such extraordinary beauty and cheapness as the series of one hundred wall pictures published by Seaman of Leipzig last year. It should carefully mount and preserve for lending to the schools reproductions of famous works, such as appear as full-page illustrations in *Harper's Bazaar* and the leading art journals. Gathered together in portfolios, they make excellent loan collections to be passed from school to school. In one of the most wretched districts of our city, in a kindergarten room, regular exhibitions for the children of the neighborhood have been held, and great interest has been aroused by allowing voting contests for favorite pictures. Sometimes, by request, these pictures have been loaned for home decoration through the summer vacation, and have been regarded with an affection that would astonish more well-to-do homes, where the pictures are often hardly more than so much upholstery. The library may encourage the making of collections of pictures for educational or artistic purposes, by distributing to the schools the quantities of illustrated magazines that sometimes accumulate, but which are not needed for binding. In brief, the library should do all that it can to encourage the teacher and the student to look at nature herself, or as she appears in the plastic arts transmuted through the alembic of man's imagination.

Too few appreciate the joy that comes from such culture. Some college classmates were once watching from a New Hampshire hilltop the glories of a summer sunset. The scientist of their number began speculating on the reasons for the relative positions of certain colors on the illuminated clouds; the poet of their number, impatient at his speculations at such a time, declared that the man was blind whose emotions in the presence of such heavenly beauty did not hush for the moment his habitual impulse to draw mathematical inferences. Whatever we may think of the poet's conclusion, we must admit that for the mass of men his attitude of mind is the one that reaps greatest joy; and in these days,

when men seek so eagerly, often so unsuccessfully, for happiness, all that we can do should be done to open the eyes of men to the wealth of beauty and of joy that may be theirs merely by turning cultivated eyes upon it. Therefore, I affirm that the larger part of all art instruction should have for its object the cultivation of taste for what the world has found to be beautiful, not for the purpose of imitative reproduction with pencil and brush—few will ever attain to skill in the use of these—but that the attempt at expression of form and color may give greater knowledge of the laws of beauty, that the æsthetic revelation of the universe to the sense of sight may be clearer, and that the pure joy of such revelation may vastly increase the happiness of men.



LIST OF LIFE AND ACTIVE MEMBERS.

ARRANGED BY STATES, CLASSES, AND YEARS OF CONTINUOUS MEMBERSHIP.

REVISED TO DECEMBER 1, 1897.

In preparing this list, the Secretary has found the records of annual membership very imperfect, especially in the earlier years. Every effort has been made, with the assistance of the members, to correct all errors. It is too much to hope that this has been fully accomplished. Further corrections will be made as errors are discovered. All whose names appear in the following list are invited to send to the Secretary, at once, corrections of errors and omissions.

Many early members of the association who have contributed largely to its growth and success are enrolled under recent dates because their membership has not been continuous, and no plan for indicating irregular memberships has been adopted. Many others have paid the dues for omitted years, received the volumes of proceedings, and obtained credit from the earliest years of their attendance. This privilege is still extended to all who wish to avail themselves of it.

All active members are urged to co-operate with the Executive Committee in extending this list until it includes the leading educators of every state, to the end that the association may receive their active support, and may in turn render most efficient service through its meetings, its organized plans for educational investigation, and its published reports.

The annual active membership fee will be due at the time of annual meeting, and may be paid by a railroad membership coupon delivered to the Treasurer, by cash payment to the Treasurer during the annual meeting, or by cash remittance to the Secretary before September 1 of each year.

The marginal years indicate the date of the commencement of continuous annual membership for those whose names immediately follow. The indented years indicate date of appointment to present educational position. The names of deceased members are indicated by a *.

Extra copies of this list may be obtained by remitting thirty cents to the Secretary, Irwin Shepard, Winona, Minn.

ALABAMA.

ACTIVE MEMBERS.

1882. JULIA S. TUTWILER.
Principal Alabama Normal College for Girls, Livingston.
1888. J. H. PHILLIPS, A.M., Marietta Coll., O.; Ph.D., Southern Univ., Ala.
1883. Superintendent of Schools, Park Ave. and 21st St., Birmingham.
1892. F. M. ROOF.
1887. Principal of Public Schools, 513, 19th St., Birmingham.
1894. LUCIEN V. LA TASTE.
Agent University Publishing Company, Box 558, Montgomery.
- JOHN MASSEY, A.M., '74, LL.D., '79, Univ. of Ala.
1876. President Alabama Conference Female College, Tuskegee.
1895. MARY A. CAHALAN.
1884. Principal of the Powell School, 2311, 4th Ave., Birmingham.
- J. B. CUNNINGHAM.
1886. Principal of Paul Hayne School, 600 S. 27th St., Birmingham.
- JOHN T. GREGORY, '89, C.E., Alabama Polytechnic Inst.
1894. Principal Grammar School, 996 Government St., Mobile.

ALABAMA—Continued.

1895. ROBERT A. MICKLE, A.B., '86, Davidson Coll., N. Car.
Principal Jefferson St. Grammar School, Mobile.
- KATE E. MOON.
Grammar Department, Public Schools, 110 N. Conception St., Mobile.
- *SOLOMON PALMER, Ph.D., '92, State Nor. Coll. of Ala.
President of Atheneum College for Girls, East Lake.
- JAMES K. POWERS, A.M., '73, LL.D., '97, Univ. of Ala.
1897. President University of Alabama, University.
- CHARLES BEN VAN WIE, Ph.M., Ph.D., '94, Ill. Wesleyan Univ.
1888. Department of Pedagogy, State Normal College, Florence.
- JOHN D. YERBY, A.B., '79, Southern Univ.
1894. Superintendent of Schools, 996 Government St., Mobile.
1897. A. C. MOORE, A.B., '87, S. Car. Coll.
Principal of High School, Birmingham.

ARIZONA.

ACTIVE MEMBERS.

1895. LYDIA L. HUNT.
1894. Superintendent U. S. Indian Boarding School, San Carlos.
- JAMES MCNAUGHTON, A.B., '62, A.M., '65, Ph.D., '87, Allegheny Coll.
1895. Principal Territorial Normal School, Tempe.

ARKANSAS.

ACTIVE MEMBERS.

1887. THOMAS A. FUTRALL, A.M., Univ. of Tenn.
Superintendent of Schools, Marianna.
1890. JOSIAH H. SHIMN, A.B., A.M., '70, Northwestern Univ.
Editor "Southern School Journal," 2121 Cumberland St., Little Rock.
1895. GEORGE B. COOK.
Superintendent of Schools, Hot Springs.
- ABBIE W. DRAUGHON.
Teacher in 4th and 5th Grades, Central School, 398 Grand Ave., Hot Springs.
- J. L. HOLLOWAY, A.M., Missouri State Normal.
1889. Superintendent of Schools, 12th and K Sts., Fort Smith.
- MAY MONNIER.
1892. Grammar Dept., Jefferson School, cor. Perry and College Sts., Helena.
- W. W. RIVERS, A.B., '86, A.M., '89, Univ. of Miss.
1894. Superintendent of City Schools, Helena.
1896. J. H. HINEMON, A.M., '93, Arkadelphia Coll.
1895. Superintendent of Schools, 1220 Olive St., Pine Bluff.
- EDWIN F. HORNE.
1893. Principal 21st St. School, 912 W. 14th St., Little Rock.
- A. L. PEACHER, A.M., Wooster Univ., O.
1895. Superintendent of Schools, Van Buren.
1897. HENDRIX COLLEGE.
A. C. Millar, President, Conway.

CALIFORNIA.

LIFE DIRECTORS.

1881. ANDREW J. RICKOFF, A.M., LL.D., Univ. Ohio.
2429 Bancroft Way, Berkeley.
1888. LEROY D. BROWN, A.B., '79, A.M., '82, Ohio Wesleyan Univ.; Ph.D., '83, Baker Univ.
San Luis Obispo.

LIFE MEMBERS.

1870. R. M. MANLEY.
635 Grant Ave., San Diego.
1877. ANNA KALFUS DE JARNETTE.
Publisher, San José.
1879. JAMES H. HOOSE, A.M., '64, Ph.D., '73, Syracuse Univ.
255 S. Euclid Ave., Pasadena.
1880. MRS. REBECCA D. RICKOFF.
2429 Bancroft Way, Berkeley.
1884. NATHAN C. TWINING, A.M., '61, Milton Coll., Wis.
1895. Principal of Victoria School, 1224 Walnut St., Riverside.
1886. C. Y. ROOF.
1893. Superintendent of Schools and Principal of High School, Santa Barbara.
1888. REBECCA F. ENGLISH.
1891. Critic Teacher, State Normal School, 141 S. 10th St., San José.
1889. AUGUSTA W. HOBE.
1888. Teacher in Grammar Grade, 1633 Hyde St., San Francisco.

CALIFORNIA—Continued.

ACTIVE MEMBERS.

1887. EDWARD T. PIERCE, LL.B., '77, Union Univ.; Ped.D., '94, N. Y. Nor. Coll.
1892. President State Normal School, Los Angeles.
1890. MRS. LEONTINE T. NEWCOMB.
1310 Larkin St., San Francisco.
1891. EARL BARNES, M.S., '90, Cornell Univ.
Department of Education, Leland Stanford Jr. University, Stanford University.
ELMER E. BROWN, Ph.D., '90, Halle.
1893. Prof. of Science and Art of Teaching, Univ. of Cal., 2341 Channing Way, Berkeley.
1893. JAMES A. FOSHAY.
1895. Superintendent of Schools, 2341 Scarff St., Los Angeles.
1894. CHARLES C. VAN LIEW, Ph.D., '93, Jena.
State Normal School, Los Angeles.
1895. LEWIS B. AVERY, B.S., '83, Tabor Coll., Ia.
1895. Principal Union High School, Redlands.
- WALTER J. BAILEY.
1895. County Superintendent of Schools, 1067 Front St., San Diego.
- SAMUEL T. BLACK.
State Superintendent Public Instruction, Sacramento.
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1868. Professor Geology and Nat. Hist., Univ. of Cal., 2739 Bancroft Way, Berkeley.
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 1892. Principal Boys' High School, 142 Jackson St., Atlanta.
 1895. ATLANTA UNIVERSITY.
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 State School Commissioner, Capitol, Atlanta.

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1897. Department of Pedagogy, Georgia State Industrial College, College, Chatham Co.
1897. W. F. SLATON, A.M., Emory Coll. and Univ. of Ga.
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Primary Teacher, 1914 Ash St., Indianapolis.
- ADELAIDE STEELE BAYLOR, Ph.B., '97, Univ. of Chicago.
1888. Principal of High School, 108 E. Hill St., Wabash.
- J. W. CARR, A.B., '85, A.M., '90, Ind. Univ.
1890. Superintendent of City Schools, 178 W. 12th St., Anderson.
- JOHN COOPER, A.M.
Principal Ward School, Indianapolis; res., Brightwood.
- MISS L. A. MELHINCH.
1896. Superintendent of City Schools, Columbia City.
- FRANCIS M. MERICA, Ph.B., '97, Univ. of Chicago; B.S., '96, Wm. Taylor Univ.
Superintendent of Schools, La Grange.
- EDWIN S. MONROE, Ph.B., '96, Ill. Wesleyan Univ.; A.M., '97, Hanover Coll.
1895. Superintendent of City Schools, Box 552, Mt. Vernon.
- WILL A. MYERS, A.B., Indiana Univ.
1896. Principal of High School, Fortville.
- O. C. SEELVE, B.A., '80, Univ. of Mich.
Superintendent of City Schools, 1401 Monroe St., La Porte.
- MAY WRIGHT SEWALL, A.B., '67, A.M., '69, Northwestern Univ.
1882. Principal Girls' Classical School, 633 N. Pennsylvania St., Indianapolis.
- STATE NORMAL SCHOOL.
President, W. W. Parsons, Terre Haute.
- J. N. STUDY.
Superintendent of Public Schools, Fort Wayne.

IOWA.

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1886. JOSIAH LITTLE PICKARD, A.B., '44, A.M., '47, Bowdoin Coll.; LL.D., '70, Chicago Univ.
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IOWA—Continued.

LIFE MEMBERS.

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Lecturer and Institute Instructor, Laurens.
1884. PHILIP EDEN, Ph.B., '72, Univ. of Wis.
1732 Clay St., Dubuque.
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Lawyer, 1635 Douglas St., Sioux City.
- W. A. WILLIS, A.M., '65.
Principal of Academy, 308 Church St., Iowa City.

ACTIVE MEMBERS.

1884. H. H. FREER, B.S., '60, M.S., '78, A.B., '80, A.M., '83, Cornell Coll., Ia.
1872. Prof. of Science and Art of Teaching and Polit. Econ., Cornell Coll., Mt. Vernon.
- WM. F. KING, A.B., '60, Ohio Wesleyan Univ.; D.D., '70, Ill. Wesleyan Univ.; LL.D., '87, State Univ. of Iowa, Ohio Wesleyan Univ.
1863. President of Cornell College, Mt. Vernon.
- * C. P. ROGERS, A.M., '73, State Univ. of Iowa.
1874. Superintendent of Schools, 100 N. 2d St., Marshalltown.
1889. W. M. BEARDSHEAR, A.B., A.M., LL.D.
1871. President of Iowa State College of Agriculture and Mechanical Arts, Ames.
- HENRY SABIN, LL.D., '93, Drake Univ.; '94, Cornell Coll.; '95, State Univ. of Iowa.
1886. State Superintendent of Public Instruction, Capitol, Des Moines.
- HOMER H. SEERLEY, Ph.B., '73, B.D., '75, A.M., '76, State Univ. of Iowa.
1886. President State Normal School, 2403 Normal St., Cedar Falls.
1890. H. E. KRATZ, A.M., '77, Ph.D., '90, Univ. of Wooster, O.
1891. Superintendent of Schools, 805 Douglas St., Sioux City.
1891. O. P. BOSTWICK, A.B., '78, Lombard Univ., Ill.
1889. Superintendent of Schools, 313, 8th Ave., Clinton.
1892. J. M. MEHAN.
1884. President Capital City Commercial College, Y. M. C. A. Building, Des Moines.
1893. J. T. MERRILL, A.B., A.M., Otterbein Univ.
1890. Superintendent of Schools, 518, 7th St., Cedar Rapids.
1894. ALBERT F. BURTON, B.S., '95, M.D., '92, Iowa State Nor. Sch.
1892. Superintendent of Schools, 4th Ave. and 2d St., Villisca.
- FRANK B. COOPER.
1891. Superintendent of Schools, 753, 17th St., Des Moines.
- JOSEPH C. HISEY.
1896. Superintendent of City Schools, 104, 4th St., Council Bluffs.
- A. V. STORM.
1894. Superintendent of Schools, Storm Lake.
- A. B. WARNER, A.M., '79, State Nor. Sch., Kirksville, Mo.
1885. Superintendent of Schools, Missouri Valley.
1895. J. J. BILLINGSLEY.
1892. Principal of Schools, Pringhar.
- M. E. CROSIER.
1892. Superintendent of Schools, Walnut.
- E. D. Y. CULBERTSON, B.D., '89, State Nor. Sch., Cedar Falls, Ia.
1895. Superintendent of Schools, Ames.
- O. E. FRENCH.
1895. Superintendent of City Schools, 602 N. Maple St., Creston.
- LYDIA HINMAN.
1886. Principal E. Waterloo High School, Waterloo.
- O. J. LAVANDER.
1888. Superintendent of Schools, 910 Main St., Cedar Falls.
- MANTIE MANGUM.
1888. Principal Washington Ave. School, 113 N. 6th St., Council Bluffs.
- J. J. McCONNELL, A.M., '80, State Univ. of Iowa.
1891. Professor of Pedagogy, State University of Iowa, 331 Summit St., Iowa City.
- W. A. McCORD.
1891. County Superintendent of Schools, 1029, 22d St., Des Moines.
- MARY McMILLAN.
1896. Teacher in 5th Grade of Public Schools, 1700, 9th Ave., Council Bluffs.
- J. J. NAGEL.
1870. Principal Grammar School No. 4, 906 W. Locust St., Davenport.
- ELLA L. PACKER.
1892. Teacher of 5th Grade, City Schools, 912, 10th St., Sioux City.
- MARY ROURKE, B.D.
1886. Principal of Schools, Farley.
- O. C. SCOTT, Ph.B., '78, B.D., '80, A.M., '81, State Univ. of Iowa.
1886. Superintendent of Schools, 414 Ave. A, East, Oskaloosa.

IOWA—Continued.

1895. W. S. SHEARER. University Place, Des Moines.
- ETTA SUPLEE. Supervisor of Primary Training, State Normal School, Cedar Falls.
- FANNIE SUPLEE. Principal, West Des Moines, 1045, 9th St., Des Moines.
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1894. Supt. of Schools, Madison Co., Winterset.
1896. R. C. BARRETT, A.M., '95, Cornell Coll., Ia.
1886. County Superintendent of Schools, Osage.
- WILLIAM BEAL.
1895. Principal of High School, Maynard.
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1894. Supt. of Schools, Madison Co., Winterset.
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1896. President Board of Education, 204 E. Main St., Marshalltown.
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Claremont.
- GEO. I. MILLER, B.S., Iowa State Coll.
1886. Superintendent of Schools, 427 Story St., Boone.
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1894. Instructor in Manual Training, West Des Moines High Schools, 3605 Center St., Des Moines.
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Superintendent of Schools, Dubuque.
- A. N. PALMER.
Commercial Teacher, Cedar Rapids.
- HATTIE A. PHILLIPS.
Supervisor of Kindergartens, Des Moines.
- MRS. CHAS. E. SHERIFF.
1891. Principal Teachers' Training School, Davenport.
- F. E. WILLARD, B.S., '89, A.M., '92, Iowa Coll.
1896. Superintendent of Schools, 206 W. Grant St., Marshalltown.
- J. B. YOUNG, A.B., '61, A.M., '64, Middlebury Coll.
1878. Superintendent of Schools, 422 E. 14th St., Davenport.
1897. C. C. BAUMANN.
Teacher of French and German in High School, 1511 Harrison St., Davenport.
- CHRISTINE BENSON.
Principal of First Ward School, 204 E. Main St., Marshalltown.
- EUGENE BROWN, B.S., Iowa Agri. Coll.
Superintendent Cerro Gordo Co., Mason City.
- J. L. BUECHELE.
Superintendent City Schools, Independence.
- H. T. BUSHNELL.
1874. Principal of Grammar School, Farnam St. and 3d Ave., Davenport.
- C. P. COLGROVE, A.M., Univ. of Chicago.
1896. Professor of Pedagogy, Iowa State Normal School, 1207 Clay St., Cedar Falls.
- W. A. DORON, M.S.
Superintendent of Schools, Eldora.
- MRS. E. DUDLEY, M.A., Cornell Coll.
1891. Teacher in High School, Paullina.
- JAMES F. EATON, A.B., B.D., A.M., D.D.
1894. Professor of Hull Educational Institute, Hull.
- HERBERT D. HAYDEN.
1896. Principal of High School, 310 Franklin Ave., Council Bluffs.
- J. F. HIRSCH, A.M., '82, Germ. Eng. Coll.
1883. President Charles City College, Charles City.
- B. J. HORCHEM.
Court House, Dubuque.
- CORNELIA KLASS.
County Superintendent Washington Co., Washington.
- F. E. LARK.
1896. County Superintendent Monona Co., Onawa.
- MARTHA E. PEET.
Primary Teacher and Kindergartner, Edgewood.
- MRS. HENRY SABIN.
Des Moines.
- A. R. SALE.
1893. Superintendent of City Schools, 226 W. 9th St., Mason City.
- W. S. SHEARER.
University Place, Des Moines.
- J. F. SMITH.
1895. County Superintendent of Schools, Waukon.

IOWA—Continued.

1897. STATE NORMAL SCHOOL.
H. H. Seerley, President, Cedar Falls.
STATE UNIVERSITY LIBRARY OF IOWA.
J. W. Rich, Librarian, Iowa City.
FLORENCE L. STRASSER, B.D., State Normal School.
1893. Teacher in First Primary, cor. 3d and Bluff Sts., Bellevue.
EMMA F. STRATFORD.
Supervisor of Drawing, Des Moines.
CYNTHIA TITUS, B.D.
Primary Teacher, 1102 Washington St., Waterloo.
A. A. WEAVER.
Agent for Maynard, Merrill & Co., Webster City.
ELLA D. WILLIAMS, B.D., '87.
Teacher in First Primary, 401 Jefferson St., Waterloo.
V. L. WILSON.
Agent American Book Co., Ottumwa.
F. M. WITTER, B.S., A.M., '76, University of Iowa.
1885. Superintendent of Schools, 1314 Mulberry St., Muscatine.
C. F. WOODWARD, A.B., A.M., Cornell Coll.
Superintendent of Schools, Eldora.

KANSAS.

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1879. President State Agricultural College, Manhattan.
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1882. President State Normal School, Emporia.

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*WALTER M. JAY, A.M., '90, Knox Coll., Ill.
1890. Head Master St. John's School, Salina.
HENRY G. LARIMER, LL.B., Univ. of Mich.
Lawyer, 535 Kansas Ave.; res., 216 Clay St., Topeka.
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Principal of Public Schools, South Haven.
JOHN MACDONALD.
Editor "Western School Journal," Topeka.
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1893. Principal of High School, 2020 N. Walnut St., Kansas City.
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Editor of "Concordia Empire," Concordia.
AARON SCHUYLER, A.M., Ohio Wesleyan Univ.; LL.D., Otterbein.
Prof. of Phil. and Higher Math., Kan. Wesleyan Univ., 1316 S. Santa Fe St., Salina.
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1894. Ex-State Superintendent of Public Instruction, Lawrence.
TEACHERS' ASSOCIATION OF COWLEY CO.
President, J. H. Anderson; Secretary, Rosa Doty, Winfield.
D. C. TILLOTSON.
621 Filmore St., Topeka.
PHILO JESSE WILLIAMS, A.M., '57, Madison Univ.; D.D., '76, Univ. of Kan.
Baldwin.

KANSAS--Continued.

ACTIVE MEMBERS.

1884. J. N. WILKINSON.
1884. Director of Training, State Normal School, 832 Merchants St., Emporia.
1889. EMORY M. WOOD, A.M., '82, Ph.D., '93, Allegheny Coll.
1887. Professor of Mathematics, Baker University, 8th and King Sts., Baldwin.
1890. WILLIAM M. DAVIDSON.
1892. Superintendent of Schools, Topeka,
ARVIN S. OLIN, A.B., '92, Ottawa Univ.; A.M., '94, Univ. of Kan.
1894. Associate Professor of Pedagogy, Univ. of Kan., 1134 Louisiana St., Lawrence.
WILLIAM C. STEVENSON.
1890. Dept. of Bookkeep. and Penman., State Nor. Sch., 1017 Mechanics St., Emporia.
1891. FRANK R. DYER, A.M., '92, Ohio Wesleyan Univ.
1895. Superintendent of Schools, 514 Topeka Ave., Wichita.
J. D. ORR.
1890. Principal Main St. School, Fort Scott.
1893. FRANCIS HUNTINGTON SNOW, Ph.D., '81, LL.D., '90, Princeton.
Chancellor of University of Kansas, Lawrence.
GEORGE E. WILKINSON, M.S., '92, Cornell Univ.
1896. Student, University of Leipzig; residence, Emporia.
1894. DELLA CLARKE.
Teacher of Music, 1025 Constitution St., Emporia.
ELVA E. CLARKE.
1893. Librarian of State Normal School, 1025 Constitution St., Emporia.
O. P. M. MCCLINTOCK.
1897. Principal Clay School, 1112 Van Buren St., Topeka.
1895. M. A. BAILEY, A.M., '79, Wesleyan Univ. of Conn.
1885. Teacher of Mathematics, State Normal School, 218 W. 12th Ave., Emporia.
O. P. BARNES.
Western Agent, Ginn & Co., Leavenworth.
- JESSIE L. CLARK.
1892. Supervisor of Music, Public Schools, 1203 N. Market St., Wichita.
- FENELLA DANA.
1889. Teacher in Public Schools, 909 Tyler St., Topeka.
- N. E. DOLPHIN.
Superintendent of Schools, Leavenworth.
- S. J. HUNTER, A.M., Kansas Univ.
1896. Professor of Etymology, University of Kansas, 113 Park Ave., Lawrence.
- MARY KELLY.
1897. Principal of Ward School, 305 S. Water St., Wichita.
- LIDA H. MILLS.
1895. Assistant in High School, 1203 N. Market St., Wichita.
- MISS M. S. MITCHELL, B.S., Geneva Coll., Penn.
1879. Teacher in Public Schools, 507 W. 6th St., Topeka.
- L. H. MURLIN, A.B., '91, S.T.B., '92, De Pauw Univ.; D.D., '97, Cornell Coll.; S.T.D., '97, Denver Univ.
1894. President Baker University, Baldwin.
- MISS C. S. NEWELL.
1890. Teacher in Public Schools, 817 W. 14th St., Topeka.
- JULIA R. PEARCE, B.S., '90, Kan. Agri. Coll.
1894. Librarian State Agricultural College, Manhattan.
- DAVID F. SHIRK.
1893. Superintendent of City Schools, Cottonwood Falls.
- E. A. SIMERWELL.
1892. Principal of Grant School, 1209 N. Western Ave., Topeka.
- *N. B. THOMPSON.
Waterville.
- H. E. WILSON.
1890. Superintendent of Indian Schools, Netawaka.
1896. B. D. VAN OSTRAND, B.S., '84, Cornell Univ.
1894. Superintendent of City Schools, Marion.
- J. J. WILKINSON, Grad. Ill. Nor. Univ.
832 Merchants St., Emporia.
1897. CHARLES A. BOYLE.
1893. Director of Music, State Normal School, 831 Constitution St., Emporia.
- LIZZIE DICKINSON.
1885. Principal of Ward School, 321 N. Topeka Ave., Wichita.
- LAURA FLAGG.
1889. Teacher in Schools, 1301 Connecticut St., Lawrence.
- C. S. FOWLER.
Principal of Schools, Burlingame.
- L. A. LOWTHER, A.B., '94, State Univ.
1896. Superintendent of City Schools, 617 Exchange St., Emporia.

KANSAS — *Continued.*

1897. H. B. PEAIRS.
Supervisor of Indian Schools, 1205 Rhode Island St., Lawrence.
- WALTER G. RISTE.
Principal of County High School, Colby.
- STATE AGRICULTURAL COLLEGE.
Julia R. Pearce, Librarian, Manhattan.
- MRS. E. DAVIDSON WORDEN.
1896. Superintendent of Primary School for Kindergartners, 1100 Topeka Ave., Topeka.

KENTUCKY.

LIFE MEMBERS.

1877. W. H. BARTHOLOMEW.
1881. Principal of Girls' High School, 426 Gray St., Louisville.
- MRS. LAURA L. MONSARRAT.
Principal of Seventh Ward School, 208 W. Walnut St., Louisville.

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Agent American Book Co., Hopkinsville.
- McHENRY RHOADS, A.M., West Ky. Coll.; Ph.M., Hartford Coll.
1891. Superintendent of Schools, 317, 3d St., Frankfort.
1892. J. D. COLEMAN, Ph.B., '91, Hartford Coll., Ky.
1892. Principal of High School, 249, 5th St., Louisville.
- MARY F. DODSON, Grad., '75, Paducah High School.
1880. Assistant Principal High School, 327 N. 4th St., Paducah.
- JAS. E. DORLAND.
1873. Agent American Book Co., 1807, 1st St., Louisville.
- GEORGE O. MCBROOM, A.B., '85, Drake Univ., Ia.
1890. Superintendent of Schools, 1035 Trimble St., Paducah.
1893. H. R. BLAISDELL, Ph.D., '76.
Principal of High School, 66 E. 7th St., Covington.
- E. H. MARK.
1894. Superintendent of Schools, Center and Walnut Sts., Louisville.
- JAMES MCGINNIS.
1891. Superintendent of Schools, 522 Frederica St., Owensboro.
1894. SUSIE M. BARTHOLOMEW.
426 E. Gray St., Louisville.
- J. M. N. DOWNES, B.S., '86, Glasgow, Ky., Nor. School.
Superintendent of Bellevue Schools, 132 Taylor Ave., Newport.
- MARY K. KEATING.
1830 W. Jefferson St., Louisville.
1895. LIVINGSTONE MCCARTNEY.
1895. Superintendent of Schools, Hopkinsville.
- ALEX L. PETERMAN.
Editor of "The Southern School," Lexington.
- * WILEY T. POYNTER, D.D., '79, Emory and Henry Coll., Va.
Principal Science Hill School, Shelbyville.
1896. F. S. ALLEY.
1896. Superintendent of Schools, Dayton.
- W. J. MCCONATHY.
1895. Principal of Normal School, 1454, 2d St., Louisville.
- EDWARD TAYLOR, A.M., Earlham Coll., Richmond, Ind.
Superintendent of Schools, 1109 College St., Bowling Green.
1897. J. G. CRABBE, A.B., A.M., Ohio Wes. Univ.; M.Ped., Ohio Univ.
1890. Superintendent of City Schools, Winchester Ave. and 22d St., Ashland.
- GEORGE BENJAMIN HAGGETT, B.S., '75, Grand River Inst.
1876. Principal of Public Schools, 1010, 5th St., Louisville.
- G. CLINTON HANNA, A.M., '72, Calvert Coll.
1895. Superintendent of City Schools, 207 Rose Hill St., Versailles.
- ANNIE G. ROTH.
1887. Teacher in Sixth Grade, Duncan St. School, 2441 W. Chestnut St., Louisville.
- DORA SNOBODA.
1889. Teacher in Primary Department, 2623 W. Chestnut St., Louisville.
- E. W. WEAVER.
1894. Superintendent of City Schools, Paris.

LOUISIANA.

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1889. MISS MARION BROWN.
1895. Principal of New Orleans Normal School, 1538, 4th St., New Orleans.
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1894. MISS H. A. SUTER.
1878. Vice-Principal of McDonough High Sch., No. 2, 1496 St. Andrew St., New Orleans.
1895. WARREN EASTON.
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1896. B. C. CALDWELL.
1896. President of State Normal School, Natchitoches.
1897. CLARA G. BAER.
1891. Dir. of Physical Education, Newcomb Coll., 1532 Washington Ave., New Orleans.
B. V. B. DIXON, A.M., LL.D.
President of Newcomb College, 1730 H. Clay Ave., New Orleans.
- EVELINE A. WALDO.
Kindergarten Training Teacher, Normal Sch., 6106 St. Charles Ave., New Orleans.

MAINE.

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Professor Mathematics, Emeritus, Maine State College, Orono.
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1879. Principal of State Normal School, Gorham.
1893. *L. A. GRAY, A.M., '61, Oberlin Coll.
1864. Principal of Business College, 22 Carleton St., Portland.
1895. JOHN S. LOCKE.
1892. Superintendent of Schools; President York Institute, Saco.
- W. W. STETSON.
1895. State Superintendent of Common Schools, 295 Minot Ave., Auburn.

MARYLAND.

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1875. Vice-Principal State Normal School, 1402 Pennsylvania Ave., Baltimore.

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1883. Superintendent of Schools, City Hall, Baltimore.
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Assistant Superintendent of Schools, 1719 Hollins St., Baltimore.
1892. E. B. PRETTYMAN, A.B., '48, A.M., '52, Dickinson Coll., Pa.
Principal State Normal School and *ex-officio* State Superintendent Public Instruction,
1200 Lafayette Ave., Baltimore.
1893. JOHN D. WORTHINGTON.
Superintendent Harford County Public Schools, Belair.
1894. ELI M. LAMB.
1864. Principal Friends' Elementary and High School, 937 and 1001 1005 McCulloh St., Baltimore.
- RACHEL E. LAMB.
Teacher in Friends' Elementary and High School, 1109 Madison Ave., Baltimore.
1895. W. H. SHELLEY, A.M., Iowa Wesleyan Univ.
1890. Principal of Girls' Latin School, St. Paul and 24th Sts., Baltimore.
1896. DANIEL C. GILMAN, LL.D., Yale.
1875. President Johns Hopkins University, Baltimore.
- H. M. ROWE, Ph.D.
12 N. Charles St., Baltimore.

MASSACHUSETTS.

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1865. WILLIAM EVARTS SHELTON, A.M., '69, Middlebury Coll., Vt.
1877. Editor of "American Teacher," and Business Department "Journal of Education,"
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1887. MRS. MARY H. HUNT.
1879. Superintendent of Educational Department of National and (1887) of World's W. C.
T. U., 23 Trull St., Boston.

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1865. Principal of State Normal School, 12 Summer St., Salem.

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1859. Master Lowell Grammar School, Boston; 4 Hawthorn St., Roxbury.
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1891. Professor of Political Science, Williams College, Williamstown.
1886. WILLIAM A. MOWRY, A.M., Brown Univ.; Ph.D., Bates Coll.
Lecturer and Writer, 17 Riverside Square, Hyde Park.

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1884. FRANK A. FITZPATRICK.
55 Franklin St., Boston.
1890. ALBERT G. BOYDEN, A.M., '61, Amherst Coll.
1860. Principal State Normal School, Bridgewater.
- MRS. MARY DANA HICKS.
1887. Director Prang Normal Art Classes, 646 Washington St., Boston.
- H. E. HOLT.
1868. Supervisor of Music, Boston Public Schools, Box 109, Lexington.
- ARTHUR P. SMITH.
Principal South Grammar School, 11 High St., Waltham.
1891. *HENRY W. BLAKE, A.B., '71, A.M., '74, Williams Coll.
Editor of "Kindergarten News," care of Milton Bradley Co., Springfield.
- G. STANLEY HALL.
President of Clark University, 94 Woodland St., Worcester.
- D. C. HEATH, A.B., '68, A.M., '71, Amherst Coll.
1876. Educational Publisher, 110 Boylston St., Boston.
- AMY MORRIS HOMANS.
Director Normal School of Gymnastics and Normal School of Household Art,
9 Appleton St., Boston.
- RAY GREENE HULING, A.B., '69, A.M., '72, D.S., '94, Brown Univ.
1893. Head Master of English High School, 101 Trowbridge St., Cambridge.
- A. EUGENE NOLAN, A.B., '67, A.M., '70, Yale.
1881. Teacher of Greek and Latin, High School, 3 Wood Place, Fitchburg.
- ALVIN F. PEASE, A.B., '75, A.M., '78, Brown Univ.
1888. Superintendent of Schools, 77 Round Hill, Northampton.
- ELIZABETH H. PERRY.
1891. Teacher of Drawing, Normal School, Bridgewater.
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President of State Normal School, Kirksville.
- PAULINE DOBSON.
Kirksville.
- R. S. DOUGLAS.
1896. Principal of High School, Malden.
- GRACE GEARY.
1896. Teacher in Superior Normal School, 1515 Campbell St., Kansas City.
- ELIZA C. GILL.
Teacher in Public Schools, 2310 Lydia St., Kansas City.
- PETER HERZOG.
Principal Blair School, St. Louis.
- BENJ. F. HOFFMAN, A.M., '88, Univ. of Mo.
1895. Professor of German, Univ. of Mo., Columbia.
- G. B. LONGAN.
1880. Principal of Schools, 1517 Michigan Ave., Kansas City.
- MRS. SALLIE C. MAGUIRE.
1887. First Assistant, Lincoln School, 912 E. 10th St., Kansas City.

MISSOURI—Continued.

1897. JOHN S. MCGHEE, A.M.
President State Normal School Board, Cape Girardeau.
J. A. MERRILL, B.S., Harvard.
Teacher of Manual Training, High School, Kansas City.
SARAH J. MILLIGAN.
1888. Principal of Webster Groves School, St. Louis.
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1894. Principal of Laclede School, 1518 S. Broadway, St. Louis.
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1890. Teacher of Higher Mathematics and Vice-President of Montana Wesleyan University, University Place, Helena.
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1889. Superintendent of Schools, Missoula.
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1896. Principal of High School, Helena.
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1897. President State Normal School, Dillon.
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Helena.
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1890. Principal of Teachers' Training School, 549 S. 26th Ave., Omaha.
1884. ROBERT CURRY, A.B., '48, A.M., '51, Jefferson Coll.; Ph.D., '73. Washington and Jefferson Coll.
Palmyra.
1886. J. H. MILLER.
1890. Editor and Publisher, "Northwestern Monthly," Lincoln.
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1890. Principal of Central Park School, 4736 N. 39th St., Omaha.
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1894. Ex-State Superintendent of Public Instruction, 206-208 Bee Building, Omaha.
1891. ALEXANDER A. MUNRO, A.B., '84, Univ. of Neb.
1887. Superintendent of Schools, 1322 N. 26th St., South Omaha.
C. G. PEARSE.
1895. Superintendent of Schools, 508 City Hall, Omaha.
1892. W. K. FOWLER.
1893. Superintendent of Schools, Blair.
1894. EDNA T. MESERVE.
1895. Teacher in Public Schools, 806 Marshall St., McCook.

NEBRASKA—Continued.

1894. D. C. O'CONNOR, A.M., '89, Allegheny Coll., Meadville, Pa.
1892. Superintendent of Schools, 1005 Lincoln St., West Point.
- ANNA TIBBETTS.
1892. Principal of Grammar School, 658 S. 17th St., Lincoln.
1895. CHARLES EDWIN BESSEY, B.S., '69, M.S., '72, Mich. Agri. Coll.; Ph.D., '79, Univ. of Iowa.
1884. Professor of Botany, the University of Nebraska, 1504 S St., Lincoln.
- EDWIN J. BODWELL, B.S., '88, Dartmouth Coll.
Superintendent of Schools, Douglas Co., Court House, Omaha.
- H. M. BRAYTON.
1892. Superintendent of Schools, Pawnee City.
- W. A. CLARK, A.B., '72, A.M., '85, Ped.D., '94, National Normal Univ.
1895. Instructor in Mathematics, State Normal School, Peru.
- J. W. CRAFTREE, B.S., '90, Bloomfield Sci. Inst.
Inspector of Nebraska High Schools, 1900 T St., Lincoln.
- A. K. GOUDY, A.M., '84, Monmouth Coll.
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- IRWEN LEVISTON, A.B., '82, A.M., '88, Dartmouth Coll.
1890. Assistant Principal of High School, 312 N. 21st St., Omaha.
- G. W. A. LUCKEY, A.B., '94, Stanford Univ.
1895. Professor of Pedagogy, University of Nebraska, 2408 Lynn St., Lincoln.
- J. T. MCKINNON, Grad., '83, State Normal School, Neb.
1892. Superintendent of Schools, Exeter.
- JENNIE PEARSON.
1894. Principal of High School, Valley.
- JENNIE L. REDFIELD.
Principal Lincoln School, 114 S. 25th St., Omaha.
- A. A. REED.
1893. Superintendent of Schools, Crete.
- W. H. SKINNER.
1893. Superintendent of Schools, 319 N. 11th St., Nebraska City.
- EMMA WHEATLEY.
Principal Mason School, Omaha.
- KATE M. WICKHAM.
Teacher in Windsor School, 34th and Martha Sts., Omaha.
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1894. Superintendent of Schools, 510, 14th St., Columbus.
1896. H. W. CALDWELL, Ph.B., '80, A.M., '94, Univ. of Neb.
Professor of Am. Hist. and Civics, Univ. of Neb., 2400 Lynn St., Lincoln.
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1897. Superintendent of Nebraska School for the Deaf, Omaha.
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County Superintendent of Schools, Dakota City.
- ALICE E. HITTE.
Supervisor of Drawing, 212 S. 25th St., Omaha.
- WILLIAM R. JACKSON.
1897. State Superintendent of Public Instruction, 1909 G St., Lincoln.
- J. PERRY MINER.
With J. H. Miller Publishing Co., Lincoln; res., Sheridan.
- J. F. SAYLOR, B.S., '82, Iowa Agri. Coll.
1895. Superintendent of City Schools, 1226 D St., Lincoln.
- A. H. WATERHOUSE.
1896. Principal of High School, Grand Island.
- HARRY KIRKE WOLFE, A.B., '80, Univ. of Neb.; A.M., Ph.D., '86, Leipzig.
1889. Professor of Philosophy, Univ. of Neb., Lincoln.
1897. S. P. ARNOT.
1896. Superintendent of City Schools, Harvard.
- KATE L. BROWN.
1896. Principal of Schools, 324 S. 26th St., Omaha.
- G. F. BURKETT.
1895. Superintendent of Schools, Schuyler.
- MARTHA M. BURNHAM.
1896. Supervisor of Drawing, Public Schools, Grand Island.
- GEO. L. FARLEY.
County Superintendent of Schools, Plattsmouth.
- ANNA FOOS.
Principal of Schools, The Madison, Omaha.
- HANNA HARRIS.
1888. Teacher in Public Schools, Central City.
- NORA H. LEMON.
Principal of Lothrop School, 1518 N. 26th St., Omaha.
- SARAH H. MCCHEANE.
Principal of Long School, 2539 Capitol Ave., Omaha.

NEBRASKA—Continued.

1897. GEORGE E. MCLEAN, B.A., M.A., LL.D., Williams; B.D., Yale; Ph.D., Leipzig.
 1895. Chancellor of the University of Nebraska, Lincoln.
 UNIVERSITY OF OMAHA.
 David M. Kerr, President, Bellevue.
 HENRY BALDWIN WARD, A.B., '85, Williams; A.M., Ph.D., '92, Harvard.
 1893. Professor of Zoology, University of Nebraska, Lincoln.

NEVADA.

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1895. WALTER C. GAYHART, C.E.
 1894. Principal of High School and Public Schools, Austin.
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 1894. President of State University of Nevada, Reno.

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LIFE MEMBERS.

1876. LANGDON SHOOK THOMPSON, A.M., '84, Marietta Coll., O.; Ped.D., '91, Univ. of the City of New York.
 1889. Supervisor of Drawing, Public Schools; 1893, Principal Metropolitan Normal Art School, 12 Park St., Jersey City.
 1884. SARAH A. STEWART.
 Avon-by-the-Sea.

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1889. A. W. MOON, A.B., '95, Indiana Univ.
 1897. Principal of School No. 2, Pleasantville.
 W. F. POWELL.
 Minister to Haiti, Port-au-Prince, Haiti; home address, Camden.
 1890. LEVI SEELEY, A.M., '83, Williams Coll.; Ph.D., '86, Leipzig.
 1895. Professor of Pedagogy, State Normal School, 482 W. State St., Trenton.
 1891. AUGUSTUS SCARLETT.
 1863. Principal of South Eighth St. School, 56 S. 11th St., Newark.
 1892. SARAH Y. ELY.
 1887. Supervisor in High and Grammar Departments of State Model School, 46 Carroll St., Trenton.
 JAMES M. GREEN, A.M., '84, Dickinson Coll.; Ph.D., '90, Ill. Wesleyan Univ.
 1889. Principal of State Normal and Model Schools, Trenton.
 JANE M. LEWIS.
 1865. Principal of Primary School No. 8, 99 Mercer St., Jersey City.
 S. E. MANNESS, A.M., '96, Univ. of Tenn.
 1890. Supervising Principal 1st District, 425 Chambers Ave., Camden.
 BRYON C. MATHEWS, A.B., '77, A.M., '92, Ph.D., '93, Syracuse Univ.
 1885. Instructor in Greek and Economics, High School, 36 Kearney St., Newark.
 HENRY M. MAXSON, A.M., '80, Amherst Coll.
 1892. Superintendent of Schools, 439 W. 6th St., Plainfield.
 JAMES M. RALSTON, A.M., '82, Dickinson Coll.
 1890. Superintendent of Schools, 707 Grand Ave., Asbury Park.
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 Ocean Grove.
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 1874. Superintendent of Schools, 14 Clinton Ave., Montclair.
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 1886. Superintendent of Schools, Middlesex Co., 185 Livingston Ave., New Brunswick.
 WM. R. WRIGHT.
 1893. Principal of Franklin Public Schools, Nutley.
 1893. MARTIN LUTHER Cox, Ped.M., '97, New York Univ.
 1893. County Superintendent of Schools, 4 Blackwell St., Dover.
 CHARLES M. DAVIS, A.B., '43, A.M., '45, Princeton.
 1891. Superintendent of Schools, 766 Avenue A, Bayonne.
 C. B. GILBERT.
 1896. Superintendent of Schools, City Hall, Newark.
 HENRY E. HARRIS.
 1879. Principal School No. 1, 64 Trask Ave., Bayonne.
 LAWRENCE C. HULL, A.B., '77, A.M., Univ. of Mich.
 1887. Latin Master, Lawrenceville School, Lawrenceville.
 MISS S. M. SEARLE.
 1893. Principal Primary Department Public School No. 23, cor. Romaine and Pavonia Aves., Jersey City.
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 Principal Jsa. Wood School, 136 E. Front St., Trenton.
 1894. WM. N. BARRINGER, A.M., Princeton; Ped.D., Univ. of City of N. Y.
 Supervisor of Evening and Summer Schools, Board of Education Rooms, Newark.

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1890. Superintendent of Schools, 71 Wallace St., Red Bank.
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1895. Principal School No. 4, 33 Dodge St., Bayonne.
- BENJAMIN C. GREGORY, A.B., Coll. of City of New York.
1888. Supervising Principal of Schools, 54 Chestnut Ave., Trenton.
- ANNA J. GUDEN.
1892. Assistant, School No. 4, 202 Avenue D, Bayonne.
- M. ALICE GULICK.
1893. Teacher in Primary Grade, Center St., Chatham.
- JOSEPH A. HALLOCK.
1854. Principal Grammar School, 120 Third Ave., Newark.
- J. F. D. HEINEKEN.
1894. Principal Public Schools, 21 W. Broad St., Burlington.
- AMELIA COOPER HEWITT.
1894. Teacher of Chemistry, State Normal School, 33 Prospect St., Trenton.
- GAIUS HOFFMAN.
1881. Principal of Schools, Bound Brook.
- WILL. C. INGALLS, A.B., '84, A.M., '87, Brown Univ.
1894. Principal Park Ave. School, 160 Orient Way, Rutherford.
- CARL F. KAYSER, Ph.D., '92, Univ. of City of New York.
1883. Instructor of Latin, German, and History, High School, 52 Nelson Pl., Newark.
- JAMES WILMER KENNEDY.
1889. Principal Miller Street Grammar School, 3 Emmett St., Newark.
- M. H. KINSLEY, B.S., '88, St. Lawrence Univ.
1895. Superintendent of Schools of Kearney, Belgrove Drive, Arlington.
- MISS H. S. LESLIE.
1885. Principal of Public Schools, Box 26, Blackwood, Camden Co.
- N. W. PEASE.
1867. Principal of School No. 2, 31 Morrell St., Elizabeth.
- J. ALBERT REINHART, A.M., '77, Ph.D., '81, Syracuse Univ.; Ph.B., '76, A.M., '77, Ph.D., '81, Delaware Coll.
1897. Principal of High School, 390 Ellison St., Paterson.
- GEO. G. RYAN, A.B., '74, A.M., '77, Middlebury Coll., Vt.
1891. Superintendent of Schools, 71 Paterson St., New Brunswick.
- E. H. SCHUYLER, A.M., '92, Princeton Coll.
1884. Professor of Mathematics, Dr. Julius Sachs Collegiate Institute, 38 W. 59th St., New York city; res., Haworth.
- FRANK H. SCOBEE.
1884. Instructor in Arithmetic and Algebra, State Normal School, Trenton.
- HENRY SNYDER, A.B., '78, A.M., '88, Lafayette Coll.
1892. Superintendent of Schools, High School, Bay St., Jersey City.
- MARGARET I. WADE.
Teacher of Mathematics, High School, 701 Grand Ave., Asbury Park.
1895. WILSON FARRAND, A.B., '86, A.M., '89, Princeton.
1889. Associate Master Newark Academy, 544 High St., Newark.
- ADA VAN STONE HARRIS.
1897. Supervisor of Primary Instruction, Public Schools, Newark.
- LENN MARIE HAWN.
1896. Superintendent of Music, Public Schools, 152 Main St., East Orange.
- ROBERT MEZGER, Graduate of the Univ. of Heidelberg, '90.
1897. First Assist. German Department, 295 Garside St., Newark.
- W. J. SHEARER, A.B., A.M., '87, Dickinson Coll.
1895. Superintendent of Schools, office, Battin High Sch., 470 Monroe Ave., Elizabeth.
1896. MILTON H. ALLEN.
Principal of Public Schools, Branch St., Medford, Burlington County.
- CHARLES J. BAXTER.
1896. State Superintendent of Public Instruction, 930 Putnam Ave., Plainfield.
- MRS. LYDIA A. BENNETT.
Principal of School No. 4, Ridgefield Park Township, Leonia, Bergen County.
- H. B. BOICE, M.D., '88, Univ. Med. Sch., New York city.
1891. State Normal School, 37 Southard St., Trenton.
- HENRY W. ELLSWORTH.
Author and Publisher of Schoolbooks, 103 Duane St., N. Y.; residence, Montvale.
- MRS. ORRELL F. ELWELL.
1876. Teacher of Grammar School, Trenton.
- D. H. FARLEY.
Teacher in State Normal School, 119 S. Stockton St., Trenton.
- HENRY DWIGHT HERVEY, A.B., '89, A.M., '96, Denison Univ.; Granville, O.
1896. Supervising Principal of Public Schools, Lakewood.

NEW JERSEY—Continued.

1896. EDWIN C. MERRILL.
Publisher, Maynard Merrill & Co., 29-33 E. 19th St., New York city; residence, E. Orange, N. J.
- A. ISABEL MULFORD.
Teacher of Botany, 36 S. Clinton St., East Orange.
- F. E. SPAULDING, A.B., '89, Amherst; Ph.D., '94, Univ. of Leipzig.
1897. Superintendent of City Schools, 54 High St., Passaic.
- MISS M. J. B. THOMAS, Ped.M., '93, N. Y. Univ.
1889. Principal of High School, 425 Ave. E., Bayonne City.
- ALBERT H. WILSON.
1892. Principal of Elmwood School, 111 Chestnut St., East Orange.
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1892. Principal of Cadwalader School, 304 W. State St., Trenton.
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1893. Principal of High School, 431 W. 6th St., Plainfield.

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1891. Professor of Mathematics in New Mexico College of Agriculture and Mechanical Arts, Las Cruces.
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1891. Superintendent of Schools, 402 S. Edith St., Albuquerque.
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1893. Member of Examining Board, Grant County, Silver City.
- C. M. LIGHT, Ph.D., Univ. of City of N. Y.
1896. Principal of Normal School of New Mexico, Silver City.
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1893. Superintendent of Schools, East Las Vegas.

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1889. Professor of Philosophy and Education, Columbia University, 119 E. 30th St., New York.
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1895. State Superintendent of Public Instruction, 453 State St., Albany.

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1875. Principal of Grammar School No. 12, and Evening High School, 206 S. Oxford St., Brooklyn.
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229 Averill Ave., Rochester.
1871. JOHN JACOB ANDERSON, A.M., '67, Rutgers Coll.; Ph.D., '76, Univ. of City of New York.
Author of School Histories and Historical Readers, 343 Adelphi St., Brooklyn.
1876. CHARLES C. ROUNDS, B.S., '57, M.S., '60, Dartmouth Coll.; A.M., Bowdoin Coll. and Waterville Coll.; Ph.D., Bates Coll.
1886. Institute Instructor and Lecturer, 256 W. 100th St., New York.
1879. *N. A. CALKINS, LL.D., Marietta Coll., O.
1863. Assistant Superintendent of Schools, 124 E. 80th St., New York.

NEW YORK—Continued.

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1886. Public School No. 6, 80 Willoughby St., Brooklyn.
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1884. MRS. GEORGIANA VAN AKEN.
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1885. THOMAS HUNTER, *A.M.*, '66, Columbia Coll.; *Ph.D.*, '77, Williams Coll.
President of Normal College, Park Ave. and 68th St., New York.
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269 Hampshire St., Buffalo.
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1892. Principal of State Normal School, 100 Brinkerhoff St., Plattsburgh.
1886. CHARLES L. PATTON.
University Publishing Co., 43 E. 10th St., New York.
1887. LOUIS H. GALBREATH, *B.L.*, '90, Cornell Univ.
1897. Psychology and Pedagogy, Teachers' College, University of Buffalo, Buffalo.
- GUSSIE POWER.
1880. Teacher, 535 Warren St., Hudson.
1889. GRACIA L. RICE.
1892. State Director of Drawing, P. O. Box 321, Buffalo.
- T. F. KANE, *A.B.*, '92, Cornell Univ.
1896. Principal of Union School and Academy, Hamburg.
1890. C. W. BARDEEN, *A.B.*, '69, Yale.
1874. Editor of "School Bulletin," 411 S. Franklin St., Syracuse.
- A. B. BLODGETT.
1889. Superintendent of School, 127 Burnet Ave., Syracuse.
- JOHN T. BUCHANAN.
1897. Principal of Boys' High School, 60 W. 13th St., New York.
- JOHN W. CHANDLER, *Ph.D.*, '77, Univ. of State of New York.
1894. Superintendent of Schools, Ellenville.
- EDWARD D. FARRELL, *A.M.*, '67, Coll. of the City of New York.
1889. Assistant Superintendent of Schools, 163 E. 124th St., New York.
- MARY A. FLEMING.
1878. Teacher in Grammar School No. 13, 13 W. Chippewa St., Buffalo.
- AMOS M. KELLOGG, *A.M.*, '57, Hamilton Coll.
Editor of "School Journal," 61 E. 9th St., New York.
- JAMES M. MILNE, *A.M.*, '83, Rochester Univ.; *Ph.D.*, '85, Colgate Univ.
1888. Principal State Normal School, Oneonta.
- FRANCIS B. PALMER, *A.B.*, '58, *A.M.*, '63, *Ph.D.*, '79, Univ. of Rochester.
1878. Principal of State Normal School, Central Ave., Fredonia.
- CHARLES B. SCOTT, *A.M.*, '87, Rutgers Coll.
Instructor in Nature Study Methods, Geology, and Geography, State Nor. School, Oswego.
- ISAAC H. STOUT, *A.M.*, '88, Hobart Coll.
1887. State Conductor of Teachers' Institutes, 58 Genesee St., Geneva.
1891. VINCENT ALDRIDGE, *A.M.*, '81, Syracuse.
1889. Teacher of Mathematics, Boys' High School, 32 Lenox Road, Brooklyn.
- FRANCIS J. CHENEY, *A.B.*, '72, *A.M.*, '75, *Ph.D.*, '88, Syracuse Univ.
Principal of State Normal and Training School, 45 Church St., Cortland.
- A. S. DOWNING, *A.M.*, Pennsylvania Coll.
1895. Supervisor of Teachers' Institute and Training Classes, State Dep't of Pub. Instr., 141 Allen St. S., Albany.
- MATTHEW J. ELGAS, *A.B.*, '62, *A.M.*, '63, Montreal Coll.; *Ph.D.*, '69, St. Johns Coll.
Principal of Grammar School No. 69, 121 W. 87th St., New York.
- HARLAN P. FRENCH, *A.B.*, '68, *A.M.*, '71, Amherst Coll.
Manager Albany Teachers' Agency, 24 State St., Albany.
- GEORGE D. HALE, *A.B.*, '70, *A.M.*, '73, Univ. of Rochester.
1871. Principal of Hale's Classical and Scientific School, 409 Lake Ave., Rochester.
- DAVID M. KELSEY, *Grad.*, '88, N. E. Conservatory of Music.
1888. Director of Music, Public Schools, 228 Spring St., Saratoga Springs.

NEW YORK—Continued.

1891. OSSIAN H. LANG.
1895. Managing Editor "School Journal" and "Educational Foundations," 61 E. 9th St., New York.
- HENRY M. LEIFZIGER, A.M., Coll. of City of N. Y.; Ph.D., Columbia Coll.
1891. Assistant Superintendent of Schools, 324 E. 50th St., New York.
- ALBERT LEONARD, A.B., '88, A.M., '91, Ohio Univ.; Ph.D., '94, Hamilton Coll.
1897. Dean of College of Liberal Arts and Professor of Pedagogy, Syracuse University, Syracuse.
- JOHN M. MILNE, A.M., '82, Rochester Univ.; Ph.D., '90, Univ. of State of N. Y.
1889. Principal of State Normal School, Geneseo.
- HENRY S. PURDY.
Principal of Union School, Brewster.
- *E. A. SHELDON, A.M., '70, Hamilton Coll.; Ph.D., '73, Univ. of N. Y.
1862. Principal of State Normal and Training School, 7th Ave., Oswego.
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1879. Professor in Cornell University, 155 E. Seneca St., Ithaca.
1892. THOMAS O. BAKER, A.M., '92, Ph.D., University of City of New York.
1895. Principal of High School, Yonkers.
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1874. Superintendent of Schools, 218 W. Ash St., Piqua.
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1889. Superintendent of Schools, 1122 Bryden Road, Columbus.

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- ROSE MORRISON.
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- MABEL L. PRAY.
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1895. Professor of Ethics, University of Oregon, Eugene.
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1887. Principal Pennsylvania First State Normal School, Millersville.

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1888. County Superintendent, Shawano.
- JOHN S. ROESLER, B.L., '88, Univ. of Wis.
1896. Superintendent of Schools of Sauk County, Prairie du Sac.
- CORNELIA E. ROGERS.
1882. Teacher in State Normal School, Whitewater.
- J. F. SIMS.
1896. Teacher of Geography and Civics in State Normal School, River Falls.
- EDWIN R. SMITH.
County Superintendent, Manitowoc.
- HARRIET E. SMITH, Grad. Oshkosh Nor. Sch.
1892. Principal of 16th District Primary School, 2409 Cedar St., Milwaukee.
- NELLIE M. SMITH.
1891. Teacher in Milwaukee Schools, 1023, 7th St., Milwaukee
- JESSIE F. SNYDER.
Grade Teacher, Williamsburg.
- J. W. SWILER.
1880. Superintendent of State School for the Deaf, Delavan.
- STATE NORMAL SCHOOL.
President, George S. Albee, 434 Algona St., Oshkosh.
- MISS J. L. TERRY.
Teacher in Model Department, State Normal School, River Falls.
- MRS. EMMA HOWELL TOLLEFSON.
1896. Teacher in Milwaukee Public Schools, Footville.
- J. M. TURNER.
Superintendent of Schools, Burlington.
- E. W. WALKER.
Institute Conductor, State Normal School, 1910 John Ave., West Superior.
- NORA C. WATERS.
Dewitt St., Portage.
- EDITH M. WATSON.
1896. Kindergartner, West Superior.
- A. W. WEBER.
Principal of High School, Fort Atkinson.
- ELLEN G. WEEKS.
720 Ontario Ave., Sheboygan.
- ALLEN B. WEST, Grad., '84, Whitewater State Nor. Sch.
1893. Principal of High School, Lake Mills.
- FRANCES WETTSTEIN.
Principal of School for the Deaf, 224, 34th St., Milwaukee.
- H. A. WHIFFLE.
Principal of High School, Whitewater.
- EMMA WILLETT.
Primary Teacher, New London.
- WILLIAM HILL WILLIAMS, B.A., '84, M.A., '87, Williams Coll.
Teacher of Mathematics in State Normal School, Platteville.

WYOMING.

ACTIVE MEMBERS.

1894. ESTELLE REEL.
1894. State Superintendent of Public Instruction, Capitol, Cheyenne.
1895. HENRY MEKEZ, B.S., A.M., Blackburn Univ.
1888. Professor of Philosophy and Social Science, University of Wyoming, 407, 92b St., Laramie.
- EMANUEL STUVER, B.S., '77, M.S., '85, Nat. Nor. Univ., Lebanon, O.; M.D., '80, Ohio Med. Coll.; Ph.D., '95, Wyo. Normal and Scientific Coll.
1895. President Wyoming Normal and Scientific College, Rawlins.
1897. J. O. CHURCHILL.
Superintendent of Schools, 2504 Ferguson St., Cheyenne.
- LIBRARY, UNIVERSITY OF WYOMING.
President, Frank Pierrepont Graves; Librarian, Grace Raymond Hebard, Laramie.

ALASKA.

ACTIVE MEMBER.

1895. CASSIA PATTON.
1894. Teacher of School No. 2, Sitka, Alaska.

CANADA.

ACTIVE MEMBERS.

1890. JAMES L. HUGHES.
Inspector of Schools, cor. York and Richmond Sts. ; 58 Henry St., Toronto.
1891. SAMUEL BOWER SINCLAIR, A.M., '93, Univ. of Toronto.
1893. Vice-Principal of Normal School, Ottawa.
1895. MRS. ADA M. HUGHES.
Superintendent of Kindergartens, Public Schools, 58 Henry St., Toronto.

HUNGARY.

ACTIVE MEMBER.

1893. BÉLA KRÉCSV, State High School Teacher's Diploma, '81.
State High School, 6th District at Budapest, VI Lovag Utca 18, Budapest, Hungary.

MEXICO.

ACTIVE MEMBER.

1897. MRS. OLIVE E. WESTON, Grad., '85, of Froebel Kindergarten Assoc.
1896. Principal of Normal Kindergarten Department in Denny School, Puente de Alvarado,
1441, City of Mexico.

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 Hammill, W. J., Wis., 1897, A.
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 Hannan, James, Ill., 1897, A.
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 Harper, William R., Ill., 1895, A.
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 Harris, Wm. T., D. C., 1876, D.
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 Kirkley, Sarah A., Ill., 1897. A.
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 Klass, Cornelia, Iowa, 1897. A.
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 Knapp, Warren E., Colo., 1890. A.
 Kneil, Thomas R., N. Y., 1895. A.
 Knispel, Henriette M., Ill., 1897. A.
 Knott, Laura A., Minn., 1897. A.
 Kolbe, Isabella A., Ohio, 1897. A.
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 Kraus Boelte, Mrs. Maria, N. Y., 1896. A.
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 Kroh, Karl J., Ill., 1897. A.
 Krohn, Wm. O., Ill., 1893. A.
 Kruse, Edwina B., Del., 1891. A.
 Lagomarsino, Cynthia, N. Y., 1894. A.
 Laird, Mrs. Ada E., Ohio, 1890. A.
 Laird, S. B., Mich., 1896. A.
 Lamb, Eli M., Md., 1894. A.
 Lamb, Rachel E., Md., 1894. A.
 Lambert, Vashti A., Ill., 1895. A.
 Lamberton, Mary J., Pa., 1892. A.
 Lane, Albert G., Ill., 1884. D.
 Lane, Mrs. A. G., Ill., 1894. A.
 Lane, F. H., N. Y., 1896. A.
 Lang, Ossian H., N. Y., 1897. A.
 Langley, Wm. T., Wis., 1897. A.
 Langley, Mrs. Wm. T., Wis., 1897. A.
 Lapee, Louise M., N. Y., 1895. A.
 Larimer, Henry G., Kan., 1886. L.
 Lark, F. E., Iowa, 1897. A.
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 Lavers, E. C., Pa., 1892. A.
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 Laws, Annie, Ohio, 1895. A.
 Lawton, Chas. E., N. Y., 1896. A.
 Laylander, O. J., Iowa, 1895. A.
 Layton, S. Herrick, Ohio, 1895. A.
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 Leach, Cephas H., Ill., 1897. A.
 Leavell, Richard M., Miss., 1896. A.
 Le Conte, Joseph, Cal., 1895. A.
 Lee, James, N. Y., 1892. A.
 Lee, L. B., Ill., 1897. A.
 Le Garde, Ellen, R. I., 1896. A.
 Leipziger, Henry M., N. Y., 1891. A.
 Leiter, Mrs. Frances W., Ohio, 1896. A.
 Lemon, Nora H., Neb., 1897. A.
 Leonard, Albert, N. Y., 1891. A.
 Leslie, Miss H. S., N. J., 1894. A.
 Leviston, Irwen, Neb., 1895. A.
 Lewellen, John O., Ind., 1896. A.
 Lewis, Leslie, Ill., 1895. A.
 Light, C. M., N. Mex., 1895. A.
 Lightbody, Wm., Mich., 1896. A.
 Limerick, A. H., Kan., 1886. L.
 Lincoln Univ., Ill., 1897. A.
 Ling, Chas. J., Colo., 1895. A.
 Lipscomb, Dabney, Miss., 1892. A.
 Little, Clara L., Colo., 1895. A.
 Livingston, J. W., Wis., 1897. A.
 Locke, John S., Me., 1895. A.
 Logan, Anna E., Ohio, 1896. A.
 Long, J. L., Tex., 1896. A.
 Longan, G. B., Mo., 1897. A.
 Longstreth, Emma J., Pa., 1894. A.
 Look, Frances H., Mass., 1896. A.
 Loos, Chas. L., Ohio, 1895. A.
 Lord, L. C., Minn., 1894. A.
 Lounsberry, Louise A., N. Y., 1896. A.
 Love, Nannie C., Ind., 1896. A.
 Lovell, Thomas B., N. Y., 1896. A.
 Low, Seth, N. Y., 1895. A.

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 Lowther, L. A., Kan., 1897, A.
 Luckey, Edwin D., Mo., 1894, A.
 Luckey, G. W. A., Neb., 1895, A.
 Luebke, Emma J., Wis., 1897, A.
 Lugg, Mary L., Wis., 1897, A.
 Lukens, Herman T., Pa., 1892, A.
 Lyman, F. A., N. Y., 1897, A.
 Lynch, Chas. P., Ohio, 1894, A.
 Lynch, Mary E., Minn., 1897, A.
 Lynch, Wm. H., Mo., 1895, A.
 Lyon, Howard, N. Y., 1896, A.
 Lyon, Mary A., N. J., 1897, A.
 Lyon, W. F., Mich., 1897, A.
 Lyte, E. Oram, Pa., 1891, L.
 McAlister, James, Pa., 1895, A.
 Macdona, Kate P., N. Y., 1895, A.
 MacDonald, John, Kan., 1886, L.
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 Mack, Wm. S., Ill., 1895, A.
 Mackenzie, David, Mich., 1896, A.
 Mackey, E., Pa., 1891, A.
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 Magee, Harriett C., Wis., 1897, A.
 Magovern, Mary A., N. Y., 1896, A.
 Maguire, Mrs. S. C., Mo., 1897, A.
 Maharry, S. H., Ohio, 1895, A.
 Malone, W. R., Ohio, 1891, A.
 Mandeville, James M., Mich., 1896, A.
 Mangum, Mantie, Iowa, 1895, A.
 Mankell, Nathalie M., N. Y., 1896, A.
 Manley, R. M., Cal., 1890, L.
 Manness, S. E., N. J., 1892, A.
 Marble, A. F., N. Y., 1886, D.
 Mardis, S. K., Ohio, 1895, A.
 Mark, E. H., Ky., 1893, A.
 Marlett, Abby L., R. I., 1894, A.
 Marsh, C. O., Wis., 1897, A.
 Marshall, Carl C., Mich., 1895, A.
 Marshall, T. Marcellus, W. Va., 1877, D.
 Martin, E. O., R. I., 1895, A.
 Martin, George H., Mass., 1893, A.
 Martin, Mina H., Wis., 1895, A.
 Massee, J. Edman, N. Y., 1896, A.
 Massey, John, Ala., 1894, A.
 Mathews, Byron C., N. J., 1892, A.
 Mauck, Joseph W., S. Dak., 1892, A.
 Maurer, G. C., Ohio, 1895, A.
 Maxson, Henry M., N. J., 1892, A.
 Maxwell, Fred. B., Ill., 1897, A.
 Maxwell, William H., N. Y., 1892, A.
 Maycock, Mark M., N. Y., 1896, A.
 Mayne, D. D., Wis., 1894, A.
 McBroom, Geo. O., Ky., 1892, A.
 McCabe, C. B., Pa., 1896, A.
 McCahan, John E., Md., 1892, A.
 McCartney, Livingston, Ky., 1895, A.
 McCheane, Sarah M., 1897, A.
 McClintock, O. P. M., Kan., 1894, A.
 McClung, J. S., Colo., 1895, A.
 McClure, S. R., Pa., 1896, A.
 McClurken, Mrs. E. G., Wis., 1896, A.
 McConathey, W. J., Ky., 1896, A.
 McConnell, J. J., Iowa, 1895, A.
 McCord, W. A., Iowa, 1895, A.
 McCowen, Mary, Ill., 1897, A.
 McCracken, Miss M. J., Pa., 1894, A.
 McCulloch, Mary C., Mo., 1892, A.
 McCullough, J. F., Ill., 1896, A.
 McDaniel, C. M., Ind., 1896, A.
 McDonald, Margaret, Ill., 1896, A.
 McElroy, E. B., Ore., 1895, A.
 McElroy, M. R., Ohio, 1895, A.
 McFadon, O. E., Minn., 1896, A.
 McFarland, Geo. A., N. Dak., 1895, A.
 McGhee, John S., Mo., 1897, A.
 McGinniss, James, Ky., 1894, A.
 McGlynn, J. J., Ill., 1895, A.
 McGregor, J. K., Wis., 1897, A.
 McIntire, W. W., Ohio, 1895, A.
 McIver, Chas. D., N. C., 1896, A.
 McKay, F. M., Ill., 1897, A.
 McKee, J. Millford, N. Y., 1895, A.
 McKenny, Chas., Mich., 1897, A.
 McKinnon, J. T., Neb., 1895, A.
 McLaughlin, A. L., Ill., 1895, A.
 McLean, Geo. E., Neb., 1897, A.
 McMillan, J. V., Ohio, 1896, A.
 McMillan, Reuben, Ohio, 1879, L.
 McMillan, Mrs. Reuben, Ohio, 1880, L.
 McMillen, Mary, Iowa, 1895, A.
 McMurry, Chas. A., Ill., 1890, A.
 McMurry, F. M., N. Y., 1895, A.
 McMurry, Mrs. Lida B., Ill., 1896, A.
 McNaughton, James, Ariz., 1895, A.
 McNeal, Florence, Mo., 1892, A.
 McNeill, I. C., Wis., 1892, A.
 McNeill, Mrs. I. C., Wis., 1892, A.
 McNelis, N. P., Pa., 1897, A.
 McNevin, C. F., Iowa, 1896, A.
 McVicar, Peter, Kan., 1896, L.
 Meacham, Adda V., Ill., 1896, A.
 Mehan, J. M., Iowa, 1892, A.
 Meland, E. C., Wis., 1897, A.
 Meleney, Clarence E., N. Y., 1896, A.
 Melhinch, Miss L. A., Ind., 1897, A.
 Merica, C. O., Wis., 1897, A.
 Merica, F. M., Ind., 1897, A.
 Merrifield, Webster, N. Dak., 1895, A.
 Merrill, Chas. E., N. Y., 1894, A.
 Merrill, Edward C., N. J., 1896, A.
 Merrill, Harriet B., Wis., 1896, A.
 Merrill, J. A., Mo., 1897, A.
 Merrill, Jenny B., N. Y., 1893, A.
 Merrill, J. T., Iowa, 1893, A.
 Mertz, Henry N., Ohio, 1895, A.
 Merwin, J. B., Mo., 1871, L.
 Merz, Henry, Wyom., 1895, A.
 Meserve, Alonzo, Mass., 1895, A.
 Meserve, Edna T., Neb., 1894, A.
 Metcalf, Robert C., Mass., 1892, A.
 Mergar, Robert, N. J., 1895, A.
 Miami University, Ohio, 1895, A.
 Mickle, Robert A., Ala., 1895, A.
 Miller, Miss A. N., Colo., 1895, A.
 Miller, C. C., Ohio, 1892, A.
 Miller, Geo. I., Iowa, 1896, A.
 Miller, G. R., N. Y., 1896, A.
 Miller, J. H., Neb., 1886, L.
 Miller, Lewis, Ohio, 1880, L.
 Miller, Lucia M., Minn., 1894, A.
 Miller, O. L., Mich., 1896, A.
 Milligan, Sarah J., Mo., 1897, A.
 Mills, Wm. A., Ind., 1896, A.
 Mills, Joseph J., Ind., 1896, A.
 Mills, Leida H., Kan., 1895, A.
 Mills, T. B., Wis., 1897, A.
 Millsbaugh, J. F., Utah, 1895, A.
 Milne, James M., N. Y., 1890, A.
 Milne, John M., N. Y., 1891, A.
 Milne, Wm. J., N. Y., 1892, A.
 Miner, J. Perry, Neb., 1896, A.
 Mitchell, M. S., Kan., 1895, A.
 Mitchell, W. R., Ill., 1897, A.
 Moldstad, John A., Tex., 1897, A.
 Monlux, J. B., Cal., 1895, A.
 Monnier, May, Ark., 1895, A.
 Monroe, E. S., Ind., 1897, A.
 Monroe, Will, S., Mass., 1893, A.
 Monsarrat, Mrs. Laura L., Ky., 1877, L.
 Montese, Frederick, N. Y., 1894, A.
 Montfort, R. V. K., N. Y., 1892, A.
 Montgomery, Dora, Ill., 1897, A.
 Montrose, Otis, N. Y., 1896, A.
 Moon, A. W., N. J., 1889, A.
 Moon, Kate E., Ala., 1895, A.
 Moore, A. C., Ala., 1897, A.
 Moore, B. F., Ind., 1896, A.
 Moore, Dora M., Colo., 1895, A.
 Moore, Carrie E., Ohio, 1895, A.
 Morgan, R. T., Ill., 1897, A.
 Morgan, W. H., Ohio, 1895, A.
 Morris, Harriet N., Ill., 1882, L.
 Morris, R. Anna, Ohio, 1891, A.
 Morrison, Andrew J., Pa., 1887, A.
 Morrison, Rose, Ohio, 1897, A.
 Morrison, W. L., Wis., 1896, A.
 Morse, Frank L., Ill., 1897, A.
 Morse, Charles H., Mass., 1895, A.
 Mott, T. A., Ind., 1896, A.

- Mowry, William A., Mass., 1886, L.
 Mulford, A. Isabel, N. J., 1896, A.
 Mumford, Mrs. M. E., Pa., 1895, A.
 Munro, Alexander A., Neb., 1891, A.
 Munroe, James Phinney, Mass., 1895, A.
 Murlin, L. H., Kan., 1895, A.
 Murphy, Geo. T., Mo., 1891, A.
 Myers, John A., W. Va., 1896, A.
 Myers, Will, Ind., 1897, A.
 Nagel, J. J., Iowa, 1895, A.
 Nageler, J. C., Wis., 1897, A.
 Needham, O., Wis., 1897, A.
 Neet, Mrs. Mary V., Mo., 1894, A.
 Nelson, Kate S., Wis., 1896, A.
 Nelson, N. L. T., Minn., 1895, A.
 Nelson, P. T., Wis., 1897, A.
 Neumann, Theo., Conn., 1897, A.
 Newcomb, Leontine T., Cal., 1890, A.
 Newell, A. C., Iowa, 1896, A.
 Newell, Miss C. S., Kan., 1895, A.
 Newton, H. D., N. Y., 1895, A.
 Nichols, Fred R., Ill., 1893, A.
 Nicholson, Mary E., Ind., 1885, A.
 Nicol, Mary A., Ill., 1896, A.
 Nightingale, A. F., Ill., 1886, A.
 Noel, Alex. H., Mo., 1897, A.
 Nolen, A. Eugene, Mass., 1891, A.
 Norris, E. J., Wis., 1897, A.
 N. Dak. Ed. Assoc., N. Dak., 1896, A.
 Northmore, John, Mich., 1897, A.
 Northrop, B. G., Conn., 1884, D.
 Norton, A. W., Mo., 1893, A.
 Norton, R. C., Mo., 1895, A.
 Norville, Josephine, Mo., 1895, A.
 Noss, Theo. B., Pa., 1896, A.
 Nunn, Janet H., Minn., 1896, A.
 Nye, Charles H., Wis., 1884, L.
 Nykirk, John B., Mich., 1892, A.
 O'Brien, Mrs. Agnes, N. Y., 1894, A.
 O'Callaghan, W. F., N. Y., 1894, A.
 O'Connor, D. C., Neb., 1894, A.
 O'Keefe, Mrs. S. J., Ill., 1896, A.
 Olds, Mary L., Minn., 1894, A.
 Oldt, F. T., Iowa, 1896, A.
 O'Leary, Kate S., Ill., 1895, A.
 Olin, Arvin S., Kan., 1890, A.
 Oliver, Fanny E., Ill., 1897, A.
 Olmstead, Emma C., Conn., 1896, A.
 Olsen, John W., Minn., 1896, A.
 Ormsby, F. B., Ill., 1896, A.
 Orr, J. D., Kan., 1891, A.
 Osborn, A. S., N. Y., 1896, A.
 Osborn, Geo. L., Mo., 1889, A.
 Osenbaugh, C. M., Colo., 1895, A.
 Osgood, Anna M., Ohio, 1890, A.
 O'Shea, M. V., Wis., 1892, A.
 Ostrander, Frank, Wis., 1897, A.
 Owen, E. H., Ill., 1897, A.
 Owen, Ermine, Mo., 1897, A.
 Owen, H. A., Ill., 1897, A.
 Owen, Lincoln, Mass., 1896, A.
 Owen, W. B., Ill., 1896, A.
 Packard, S. S., N. Y., 1892, A.
 Packer, Ella L., Iowa, 1895, A.
 Page, R. S., Ill., 1896, A.
 Palmer, A. N., Iowa, 1896, A.
 Palmer, Charles S., Colo., 1895, A.
 Palmer, E. D., Mich., 1894, A.
 Palmer, Francis B., N. Y., 1890, A.
 *Palmer, Solomon, Ala., 1895, A.
 Parker, Chas. I., Ill., 1887, D.
 Parker, Charles V., Colo., 1887, A.
 Parker, C. M., Ill., 1895, A.
 Parker, Francis W., Ill., 1880, A.
 Parker, Henry M., Ohio, 1895, A.
 Parker, W. D., Wis., 1884, L.
 Parker, Mrs. W. D., Wis., 1897, A.
 Parker, W. S., Mass., 1896, A.
 Parkinson, D. B., Ill., 1897, A.
 Parkinson, John B., Wis., 1884, L.
 Parmenter, Chas. W., Mass., 1895, A.
 Parr, S. S., Minn., 1895, A.
 Parrish, Celestia S., Va., 1897, A.
 Parrish, Ophelia, Mo., 1896, A.
 Parsons, H. S., Tex., 1895, A.
 Passmore, John A. M., Pa., 1892, A.
 Patten, Frank C., Mont., 1897, A.
 Pattengill, Henry R., Mich., 1892, A.
 Patterson, B. F., Pa., 1895, A.
 *Patterson, Susan G., Ind., 1894, A.
 Patton, Cassia, Alaska, 1895, A.
 Patton, Chas. L., N. Y., 1886, A.
 Paxson, Everett E., Mont., 1889, A.
 Payne, Bertha, Ill., 1896, A.
 Payne, W. C., Ill., 1896, A.
 Payne, William H., Tenn., 1892, A.
 Peacher, A. L., Ark., 1896, A.
 Peairs, H. B., Kan., 1897, A.
 Peak, Chas. N., Ind., 1896, A.
 Pearce, Julia R., Kan., 1895, A.
 Pearce, C. G., Neb., 1891, A.
 Pearson, C. W., Wis., 1897, A.
 Pearson, Jennie, Neb., 1895, A.
 Pease, Alvin F., Mass., 1891, A.
 Pease, N. W., N. J., 1894, A.
 Peaslee, John B., Ohio, 1880, L.
 Peck, A. L., N. Y., 1897, A.
 Peet, Martha E., Iowa, 1897, A.
 Pendergast, W. W., Minn., 1894, A.
 Pennell, Calvin S., Minn., 1894, L.
 Perigo, J. T., N. Mex., 1895, A.
 Perrine, Lura L., N. Dak., 1895, A.
 Perry, Elizabeth H., Mass., 1891, A.
 Perry, Geo. F., Wis., 1894, A.
 Perry, W. S., Mich., 1892, A.
 Pershing, Thed., Pa., 1896, A.
 Peterman, Alex. L., Ky., 1895, A.
 Peterson, J. P., Wis., 1897, A.
 Pfeiffer, J. W., Ohio, 1895, A.
 Phelps, Mary A., Ill., 1897, A.
 Phelps, Neal S., Mich., 1896, A.
 Phelps, William F., Minn., 1870, D.
 Philbrook, C. F., Ill., 1895, A.
 Phillips, Geo. M., Pa., 1879, A.
 Phillips, Hattie A., Iowa, 1896, A.
 Phillips, J. H., Ala., 1888, A.
 Pickard, Josiah L., Iowa, 1886, D.
 Pierce, Edward T., Cal., 1887, A.
 Pierce, Mrs. Ella M., R. I., 1896, A.
 Pierce, Mary K., Ill., 1897, A.
 Pike, Joshua, Ill., 1891, D.
 Piper, Jonathan, Ill., 1895, A.
 Place, Mrs. C. L., Cal., 1896, A.
 Plapp, F. W., Ill., 1897, A.
 Plimpton, Geo. A., N. Y., 1894, A.
 Plummer, Geo. M., Ohio, 1896, A.
 Poland, A. B., N. Y., 1892, A.
 Pollock, Rosalie, N. Dak., 1897, A.
 Pollock, Susan P., D. C., 1894, A.
 Posse, Baroness Rose, Mass., 1895, A.
 Powell, W. B., D. C., 1892, A.
 Powell, W. F., N. Y., 1886, A.
 Power, Gussie, N. Y., 1887, A.
 Powers, James K., Ala., 1895, A.
 *Poynter, Wiley T., Ky., 1895, A.
 Pratt, Mara L., Mass., 1895, A.
 Pray, Mabel L., Ohio, 1897, A.
 Pray, T. B., Wis., 1894, A.
 Preece, Mrs. Louise, N. Y., 1894, A.
 Prentiss, H. W., Mo., 1897, A.
 Preston, J. R., Miss., 1890, A.
 Prettyman, E. B., Md., 1892, A.
 Price, Margaret, Wis., 1897, A.
 Prichard, E. H., Ohio, 1895, A.
 Prillerman, Byrd, W. Va., 1891, A.
 Prince, John T., Mass., 1891, A.
 Principals' Association, Wis., 1884, L.
 Principals' Assn., Milwaukee, Wis., 1884, L.
 Pringle, Wm. J., Ill., 1896, A.
 Pritchard, M. T., Mass., 1896, A.
 Pritchett, H. C., Tex., 1892, A.
 Proudfoot, Mrs. A. H., Ill., 1897, A.
 Public School Teachers, Janesville, Wis., 1884, L.
 Purdy, Henry S., N. Y., 1891, A.
 Purer, Mary I., Ill., 1890, A.
 Putnam, Mrs. Alice H., Ill., 1893, A.
 Raab, Henry, Ill., 1884, L.
 Race, S. J., Minn., 1895, A.
 Ralston, James M., N. J., 1892, A.
 Ramsay, Charles C., Mass., 1893, A.

- Ramsey, Geo. J., La., 1880, A.
 Rankin, A. W., Minn., 1893, A.
 Rankin, W. S., Wis., 1897, A.
 Raschig, H. H., Ohio, 1893, A.
 Rassweiler, J. K., Ill., 1897, A.
 Raub, A. N., Del., 1892, A.
 Rayman, R. E., Ohio, 1895, A.
 Raymond, Andrew V. V., N. Y., 1895, A.
 Ready, Geo. W., Ohio, 1897, A.
 Redfield, Jennie L., Neb., 1895, A.
 Reed, A. A., Neb., 1895, A.
 Reed, Geo. H., Wis., 1897, A.
 Reed, Grace, Ill., 1896, A.
 Reel, Estelle, Wyo., 1894, A.
 Reeves, C. E., Wash., 1896, A.
 Reid, James, Mont., 1895, A.
 Reiley, Cynthia E., Mont., 1895, A.
 Reinhart, J. Albert, N. J., 1894, A.
 Remington, Lew. D., Mich., 1896, A.
 Rennick, Louise D., Ill., 1897, A.
 Rennie, Robert H., Ill., 1897, A.
 Reaser, Edwin D., Ore., 1892, A.
 Reveley, Ellen G., Ohio, 1891, A.
 Reynolds, Chas. B., Mo., 1895, A.
 Rhoads, McHenry, Ky., 1891, A.
 Rice, Emily A., N. J., 1892, A.
 Rice, Gratia L., N. Y., 1889, A.
 Rice, J. M., N. Y., 1895, A.
 Richards, E. E., Ohio, 1894, A.
 Richards, Zalmon, D. C., 1864, D.
 Richardson, Frank B., Mass., 1896, A.
 Richmond, Sarah E., Md., 1876, L.
 Rickoff, Andrew J., Cal., 1881, D.
 Rickoff, Rebecca D., Cal., 1880, L.
 Riddle, W., Pa., 1896, A.
 Rider, Andrew J., N. J., 1897, A.
 Ridge, J. C., Ohio, 1897, A.
 Riley, Mrs. Matilda E., Mo., 1890, A.
 Riordon, J. E., Wis., 1897, A.
 Riste, W. G., Kan., 1897, A.
 Rivers, W. W., Ark., 1895, A.
 Robbins, C. W., Mo., 1892, A.
 Robbins, Geo. A., Ill., 1897, A.
 Robert, James A., Ohio, 1882, L.
 Roberts, Flora, Ind., 1896, A.
 Roberts, Hester A., N. Y., 1894, A.
 Roberts, H. L., Ill., 1897, A.
 Roberts, J. W., Ill., 1896, A.
 Roberts, L. D., Wis., 1897, A.
 Robertson, J. L., Ill., 1897, A.
 Robertson, Powhatan W., D. C., 1896, A.
 Robinson, Albert R., Ill., 1895, A.
 Robinson, Oscar D., N. Y., 1892, A.
 Robinson, W. S., Ohio, 1895, A.
 Rocheleau, W. F., Ill., 1896, A.
 Rocholl, L. J., Minn., 1897, A.
 Roeselet, John S., Wis., 1897, A.
 Rogers, Cornelia E., Wis., 1897, A.
 *Rogers, C. P., Iowa, 1884, A.
 Rogers, Dora B., W. Va., 1896, A.
 Rogers, Josephine E., N. Y., 1893, A.
 Rogers, Lillian E., Mass., 1897, A.
 Rogers, Rovillus R., N. Y., 1895, A.
 Rood, Wilbur V., Ohio, 1896, A.
 Roof, F. M., Ala., 1892, A.
 Roop, C. Y., Cal., 1886, L.
 Roof, M. A., N. Y., 1896, A.
 Rose, Geo. E., Kan., 1886, L.
 Rose, S. L., Ohio, 1896, A.
 Roth, Anna C., Ky., 1897, A.
 Rounds, Chas. C., N. Y., 1876, L.
 Rounds, Katharine E., N. Y., 1894, A.
 Rourke, Mary, Iowa, 1895, A.
 Rowe, Alex. M., Minn., 1894, A.
 Rowe, Geo. W., Ill., 1897, A.
 Rowe, H. M., Md., 1896, A.
 Rowe, Mary E., Ind., 1895, A.
 Rowe, W. S., Ind., 1895, A.
 Royal, M. G., Ore., 1896, A.
 Royce, Geo. H., Ill., 1897, A.
 Russell, James E., N. Y., 1895, A.
 Russell, J. A., Mass., 1894, A.
 Ryan, Geo. G., N. J., 1894, A.
 Ryon, C. M., N. Y., 1896, A.
 Sabin, Albert R., Ill., 1884, A.
 Sabin, Ellen C., Wis., 1895, A.
 Sabin, Henry, Iowa, 1889, A.
 Sabin, Mrs. Henry, Iowa, 1897, A.
 Sabin, Kate L., Wis., 1895, A.
 Sage, W. V., Mich., 1896, A.
 Sale, A. R., Iowa, 1897, A.
 Salisbury, Albert, Wis., 1887, A.
 Samuel, Wm. H., Pa., 1893, A.
 Sanders, D. E., Mont., 1895, A.
 Sanders, F. W., W. Va., 1897, A.
 Sandison, Howard, Ind., 1896, A.
 Sanford, F., Cal., 1897, A.
 Sanford, Henry R., N. Y., 1895, A.
 Sanor, S. D., Ohio, 1893, A.
 Sargent, Dudley A., Mass., 1896, A.
 Sargent, Eliza A., N. Y., 1896, A.
 Saunders, Sara A., N. Y., 1896, A.
 Savage, Reed, Ill., 1889, A.
 Sawhill, Thomas A., Kan., 1886, L.
 Sawvel, Franklin B., Pa., 1894, A.
 Sawyer, C. L., Minn., 1897, A.
 Scarlett, Augustus, N. J., 1891, A.
 Schaeffer, Nathan C., Pa., 1887, A.
 Schaeffer, Alfred T., N. Y., 1895, A.
 Schermerhorn, Jane A., N. Y., 1895, A.
 Schiller, J. D., Mich., 1896, A.
 Schilling, J. W., N. Y., 1894, A.
 Schmucker, S. C., Pa., 1892, A.
 Schneider, Henry G., N. Y., 1895, A.
 Schofield, Martha, S. C., 1891, L.
 Scholfield, Beattie, R. I., 1896, A.
 Schreiber, Mae E., Wis., 1896, A.
 Schryver, Anna A., Mich., 1896, A.
 Schurman, J. G., N. Y., 1896, A.
 Schuyler, Aaron, Kan., 1886, L.
 Schuyler, E. H., N. J., 1894, A.
 Schoey, Frank H., N. J., 1894, A.
 Scott, Charles B., N. Y., 1890, A.
 Scott, E. H., Ill., 1895, A.
 Scott, F. N., Mich., 1897, A.
 Scott, Harriet M., Mich., 1896, A.
 Scott, Izora, Colo., 1897, A.
 Scott, James W., Ohio, 1893, A.
 Scott, O. C., Iowa, 1895, A.
 Scott, W. H., Ohio, 1893, A.
 Scudder, Myron Tracy, Conn., 1895, A.
 Scull, James F., Ind., 1895, A.
 Searing, Edward, Minn., 1895, A.
 Searle, Miss S. M., N. J., 1893, A.
 Seaver, Edwin P., Mass., 1893, A.
 Sealey, Chas. D., N. Y., 1896, A.
 Sealey, Levi, N. J., 1890, A.
 Sealey, O. C., Ind., 1897, A.
 Seerley, H. H., Iowa, 1884, A.
 Sellars, D. Francis, Ill., 1896, A.
 Sewall, May W., Ind., 1897, A.
 Sexton, E. K., N. J., 1897, A.
 Shanahan, Rev. J. W., Pa., 1895, A.
 Sharkey, J. P., Ohio, 1890, A.
 Shaw, A. L., Mich., 1897, A.
 Shaw, Edward R., N. Y., 1893, A.
 Shaw, Samuel, Wis., 1884, L.
 Shawan, J. A., Ohio, 1894, L.
 Shear, S. R., N. Y., 1895, A.
 Shearer, W. J., N. J., 1895, A.
 Shearer, W. S., Iowa, 1897, A.
 Sheats, W. N., Fla., 1893, A.
 *Sheldon, E. A., N. Y., 1891, A.
 Sheldon, William E., Mass., 1865, L.
 Shelley, W. H., Md., 1895, A.
 Shepard, Geo. C., Mich., 1897, A.
 Shepard, Irwin, Minn., 1883, A.
 Sheriff, Mrs. Chas. E., Iowa, 1896, A.
 Shields, D. W., W. Va., 1895, A.
 Shinn, Josiah H., Ark., 1890, A.
 Shirk, David F., Kan., 1895, A.
 Shippin, Edward, Pa., 1879, L.
 Shoemaker, W. A., Minn., 1895, A.
 Shorney, Geo. H., Ill., 1897, A.
 Shrieves, Emma, Wis., 1896, A.
 Shutts, Geo. C., Wis., 1896, A.
 Sibley, Chas. A., Mass., 1895, A.
 Sickel, J. F. C., Pa., 1894, A.
 Stefert, H. O. R., Wis., 1895, A.
 Silcox, Julia C., Ohio, 1897, A.

- Silke, Lucy, Ill., 1893, A.
 Silver, Edgar O., Mass., 1894, A.
 Simerwell, E. A., Kan., 1895, B.
 Simonds, H. A., Wis., 1895, A.
 Sims, J. F., Wis., 1897, A.
 Sinclair, S. B., Can., 1891, A.
 Singer, Edgar A., Pa., 1880, L.
 Sisson, E. O., Ill., 1897, A.
 Skidmore, Sydney T., Pa., 1895, A.
 Skinner, Chas. R., N. Y., 1890, D.
 Skinner, Wm. C., Ohio, 1895, A.
 Skinner, W. H., Neb., 1895, A.
 Slack, H. W., Minn., 1897, A.
 Slade, James P., Ill., 1895, A.
 Slaton, W. F., Ga., 1897, A.
 Slaton, W. M., Ga., 1894, A.
 Slauson, H. M., Ill., 1894, A.
 Smallwood, Mabel E., Ill., 1896, A.
 Smart, James H., Ind., 1877, D.
 Smiley, Wm. H., Colo., 1892, A.
 Smith, Albert L., Ill., 1897, A.
 Smith, Arthur P., Mass., 1890, A.
 Smith, A. Thomas, Pa., 1893, A.
 Smith, Anna T., D. C., 1895, A.
 Smith, Carrie J., Wis., 1895, A.
 Smith, Edwin R., Wis., 1897, A.
 Smith, E. E., Ga., 1896, A.
 Smith, E. R., Ill., 1897, A.
 Smith, Euler B., Ca., 1887, A.
 Smith, Geo. M., S. D., 1895, A.
 Smith, Harriet E., Wis., 1897, A.
 Smith, H. J., Vt., 1895, A.
 Smith, J. F., Iowa, 1897, A.
 Smith, J. Mace, N. Y., 1895, A.
 Smith, J. N., Pa., 1896, A.
 Smith, Nellie M., Wis., 1897, A.
 Smith, S. McKee, N. Y., 1896, A.
 Smith, Sydney F., Colo., 1895, A.
 Smith, Wm. G., Minn., 1895, A.
 Smyth, W. S., Ill., 1895, A.
 Snoboda, Dora, Ky., 1897, A.
 Snow, Miss Bonnie, Minn., 1896, A.
 Snow, Francis H., Kan., 1893, A.
 Snyder, E. R., Colo., 1895, A.
 Snyder, Henry N. J., 1894, A.
 Snyder, Jessie F., Wis., 1897, A.
 Snyder, Jessie M., Ga., 1897, A.
 Snyder, J. L., Mich., 1889, A.
 Snyder, Lydia E., Ill., 1895, A.
 Snyder, W. R., Ind., 1895, A.
 Snyder, Z. X., Colo., 1887, A.
 Snyder, Mrs. Z. X., Colo., 1896, A.
 Soldan, F. Louis, Mo., 1877, D.
 Sollitt, Alice E., Ill., 1893, A.
 Soule, George, La., 1892, A.
 Spaulding, F. E., N. J., 1896, A.
 Spaulding, Randall, N. J., 1892, A.
 Spayd, H. H., Pa., 1892, A.
 Speer, W. W., Ill., 1896, A.
 Spencer, Pauline W., Pa., 1893, A.
 Spencer, Robert C., Wis., 1884, L.
 Spencer, Mrs. Sara A., D. C., 1892, A.
 Springer, Durand W., Mich., 1894, A.
 Squire, Mary F., N. Y., 1896, A.
 Stableton, J. K., Mass., 1892, A.
 Stanford, Alma B., Minn., 1897, A.
 Stanley, Edmund, Kan., 1886, L.
 Staples, Helen F., Minn., 1896, A.
 Stark, Joshua, Wis., 1884, L.
 Starratt, Mrs. H. E., Ill., 1897, A.
 State Historical Society, Wis., 1884, L.
 State Nor. School, Athen. Lit. Soc., Wis., 1884, L.
 State Nor. School, Cedar Falls, Iowa, 1897, A.
 State Nor. School, Ellensburg, Wash., 1897, A.
 State Nor. School, Greeley, Colo., 1897, A.
 State Nor. School, Los Angeles, Cal., 1897, A.
 State Nor. School, Mansfield, Pa., 1897, A.
 State Nor. School, Moorhead, Minn., 1897, A.
 State Nor. School, Oshkosh, Wis., 1897, A.
 State Nor. School, Phila. Soc., Wis., 1884, L.
 State Nor. School, Platteville, Wis., 1884, L.
 State Nor. School, St. Cloud, Minn., 1897, A.
 State Nor. School, Terre Haute, Ind., 1897, A.
 State Nor. School, Trenton, N. J., 1897, A.
 State Nor. School, Winona, Minn., 1897, A.
 State Teachers' Association of Ill., 1890, D.
 Stearns, J. W., Wis., 1884, L.
 Steele, Paul A., D. C., 1896, A.
 Steele, Wm. L., Ill., 1890, A.
 Steere, E. A., Wash., 1896, A.
 Stehman, J. H., Ill., 1897, A.
 Stephens, H. Morse, N. Y., 1896, A.
 Stephenson, Lillie S., Ill., 1895, A.
 Stern, Menno, N. Y., 1882, L.
 Stetson, W. W., Maine, 1895, A.
 Stevens, Moses C., Ind., 1876, L.
 Stevens, Plowden, Jr., N. Y., 1895, A.
 Stevenson, A. L., Ill., 1897, A.
 Stevenson, M. Cornelia, Minn., 1897, A.
 Stevenson, Wm. C., Kan., 1890, A.
 Stewart, J. N., Wis., 1884, L.
 Stewart, John A., Mich., 1884, A.
 Stewart, Joseph S., Ga., 1895, A.
 Stewart, N. Coe, Ohio, 1892, A.
 Stewart, Sarah A., N. J., 1884, L.
 Strickney, Lucia, Ohio, 1893, A.
 Stitt, E. W., N. Y., 1896, A.
 Stockleman, Mary E., Ohio, 1896, A.
 Stockwell, Mrs. Helen H., N. Dak., 1894, A.
 Stockwell, Thomas B., R. I., 1891, A.
 Stockwell, Walter L., N. Dak., 1894, A.
 Stokes, Horace A., Ohio, 1895, A.
 Stone, Mason S., Vt., 1894, A.
 Stonerod, Rebecca, D., D. C., 1896, A.
 Storm, A. V., Iowa, 1894, A.
 Stout, Geo. H., Pa., 1884, A.
 Stout, Isaac H., N. Y., 1890, A.
 Stowell, Thomas B., N. Y., 1891, A.
 Strachan, Alex., S. Dak., 1897, A.
 Strader, Ellen J., Minn., 1897, A.
 Strasser, Florence L., Iowa, 1897, A.
 Stratford, Emma F., Iowa, 1897, A.
 Stratford, W. R. J., Ind., 1895, A.
 Stratton, C. C., Ore., 1888, D.
 Stratton, Frederick E., Minn., 1886, A.
 Strong, Edwin A., Mich., 1892, A.
 Strong, James W., Minn., 1895, A.
 Stubbs, J. E., Nev., 1895, A.
 Study, J. N., Ind., 1897, A.
 Stuver, E. Wyo., 1895, A.
 Sudborough, Mrs. Grace B., Neb., 1880, L.
 Sullivan, Christine, Ohio, 1886, A.
 Super, Chas. W., Ohio, 1897, A.
 Suplee, Etta, Iowa, 1895, A.
 Suplee, Fannie, Iowa, 1895, A.
 Suter, Anna, Ind., 1890, A.
 Suter, Miss H. A., La., 1894, A.
 Sutherland, Margaret W., Ohio, 1895, A.
 Sutton, W. S., Tex., 1895, A.
 Swain, Joseph, Ind., 1893, A.
 Swan, Lizzie P., Ill., 1897, A.
 Swart, Rose C., Wis., 1895, A.
 Swiler, J. W., Wis., 1897, A.
 Sylvester, Carrie, Wis., 1895, A.
 Syphax, Carrie E., D. C., 1895, A.
 Tadd, J. Liberty, Pa., 1892, A.
 Tagg, Clara G., Ohio, 1896, A.
 Talmage, James E., Utah, 1895, A.
 Tanner, J. M., Utah, 1897, A.
 Tapley, William W., Mass., 1892, A.
 Tarbell, Horace S., R. I., 1891, A.
 Taubman, Kate, S. Dak., 1894, A.
 Taylor, A. R., Kan., 1886, D.
 Taylor, Cordie, Mo., 1895, A.
 Taylor, Edward, Ky., 1896, A.
 Taylor, Henry J., Iowa, 1884, L.
 Taylor, J. F., Neb., 1896, A.
 Taylor, Joseph S., N. Y., 1894, A.
 Teachers' Asso. of Cowley Co., Kan., 1886, L.
 Teachers' Asso. of Riley Co., Kan., 1886, L.
 Teachers' Association, Wis., 1884, L.
 Teachers' Corps, Inter. and Upper Sec., Wis., 1884, L.
 Teachers' Corps, Primary Sec., Wis., 1884, L.
 Teachers' Institute, Philadelphia, Pa., 1879, D.
 *Tear, John H., Ill., 1895, A.
 Templeton, J. C., Mont., 1894, A.
 Terrel, Harriet E., Ohio, 1896, A.
 Terry, H. I., Wis., 1896, A.
 Terry, Miss J. L., Wis., 1897, A.
 Tharpe, F. D., Mo., 1891, A.

- Thatcher, J. L., Minn., 1896, A.
 Thayer, Ada F., N. Y., 1896, A.
 Thayer, J. B., Wis., 1884, L.
 Theilman, Louis, Mo., 1895, A.
 Thiry, J. H., N. Y., 1897, A.
 Thomas, D. W., Ind., 1896, A.
 Thomas, Mrs. Emma A., Mich., 1896, A.
 Thomas, Miss M. J. B., N. J., 1896, A.
 Thomas, R. S., Ohio, 1896, A.
 Thompson, Charles W., Mo., 1894, A.
 Thompson, E. C., Mich., 1896, A.
 Thompson, H. E., Okla., 1895, A.
 Thompson, John G., Mass., 1895, A.
 Thompson, Langdon S., N. J., 1876, L.
 *Thompson, N. B., Kan., 1895, A.
 Thompson, Wm. O., Ohio, 1894, A.
 Thomson, Frank D., Ill., 1895, A.
 Thurber, Chas. H., Ill., 1893, A.
 Thwing, Charles F., Ohio, 1895, A.
 Tibbets, Anna, Neb., 1894, A.
 Tibbets, A. C., Minn., 1895, A.
 Tiffany, A. J., Ill., 1897, A.
 Tillotson, D. C., Kan., 1886, L.
 Titus, Cynthia, Iowa, 1897, A.
 Todd, Emma J., Ill., 1897, A.
 Todd, Samuel B., Wis., 1895, A.
 Tollefson, Mrs. E. H., Wis., 1897, A.
 Tolman, Henry L., Ill., 1897, A.
 Tompkins, A., Ill., 1896, A.
 Tower, Belle M., Mich., 1897, A.
 Tracy, Frank N., Ill., 1896, A.
 Trant, Amelia Earle, N. Y., 1896, A.
 Trask, H. M., Pa., 1895, A.
 Travell, Ira W., N. J., 1897, A.
 Tressler, A. W., Mich., 1892, A.
 Treudley, F., Ohio, 1891, A.
 Tucker, Anna M. P., Ohio, 1896, A.
 Turner, Alfred, Mass., 1895, A.
 Turner, J. E., Ill., 1895, A.
 Turner, J. M., Wis., 1897, A.
 Turner, Marie L., Mo., 1895, A.
 Tuttle, Albert H., Va., 1896, A.
 Tutwiler, Julia S., Ala., 1882, A.
 Twichell, Hattie, Mass., 1895, A.
 Twining, Nathan, Cal., 1884, L.
 Twiss, Geo. R., Ohio, 1894, A.
 Underhill, Volney, Ill., 1893, A.
 University of California, 1895, A.
 University of Georgia, 1895, A.
 University of Iowa, 1897, A.
 University of Missouri, 1895, A.
 University of Omaha, Neb., 1897, A.
 University of State of N. Y., 1893, L.
 University of Utah, 1895, A.
 Vail, Henry H., N. Y., 1897, A.
 Vaile, E. O., Ill., 1895, A.
 Van Aken, Mrs. Geo., N. Y., 1894, L.
 Vance, Sophie, Ohio, 1890, A.
 Van Cleve, Edward M., Ohio, 1897, A.
 Vandervort, C. R., Ill., 1896, A.
 Vandyke, J. A., Minn., 1896, A.
 Van Liew, Chas. C., Cal., 1894, A.
 Van O'Linda, Mary G., N. Y., 1897, A.
 Van Orstrand, B. D., Kan., 1896, A.
 Van Rensselaer, Martha, N. Y., 1894, A.
 Van Sickle, James H., Colo., 1892, A.
 Van Wic, Charles B., Ala., 1895, A.
 Vaughn, W. H., Mo., 1896, A.
 Veatch, Nathan T., Ill., 1895, A.
 Vert, Edmund J., S. Dak., 1895, A.
 Vose, L. D., Ill., 1894, A.
 Wash College, Ind., 1895, A.
 Wade, Margaret L., N. J., 1894, A.
 Waite, Emma S., N. Y., 1896, A.
 Waldo, Eveline A., La., 1897, A.
 Walke, Matilda L., Ohio, 1892, A.
 Walker, P. R., Ill., 1892, A.
 Walker, Miss E., Minn., 1897, A.
 Walker, E. W., Wis., 1897, A.
 Walrath, M. H., N. Y., 1896, A.
 Walsh, J. H., N. Y., 1895, A.
 Walton, Geo. A., Mass., 1892, A.
 Ward, Henry B., Neb., 1897, A.
 Ware, N. E., Ga., 1896, A.
 Warner, A. B., Iowa, 1894, A.
 Warr, J. W., Ill., 1895, A.
 Waterbury, R. A., N. Y., 1896, A.
 Waterhouse, A. H., Neb., 1896, A.
 Waterman, Richard, Ill., 1896, A.
 Waters, Nora C., Wis., 1897, A.
 Watson, Edith M., Wis., 1897, A.
 Watt, W. E., Ill., 1895, A.
 Weaver, A. A., Iowa, 1897, A.
 Weaver, E. W., Ky., 1897, A.
 Weaver, W. D., Ind., 1895, A.
 Weber, A. W., Wis., 1897, A.
 Weber, Edith, Mo., 1895, A.
 Webster, C. I., N. Y., 1891, A.
 Webster, W. F., Minn., 1896, A.
 Weeks, C. W., Ill., 1895, A.
 Weeks, Ellen G., Wis., 1897, A.
 Weld, Frank A., Minn., 1895, A.
 Welles, Frank E., N. Y., 1895, A.
 Welsh, J. P., Pa., 1896, A.
 Welton, Wm., Ill., 1897, A.
 Wentz, Etta L., N. Y., 1896, A.
 Wernick, E. V., Wis., 1895, A.
 West, Allen B., Wis., 1897, A.
 Westcott, O. S., Ill., 1895, A.
 Westervelt, Z. F., N. Y., 1897, A.
 Weston, Mrs. O. E., Mex., 1897, A.
 Wettstein, Frances, Wis., 1897, A.
 Wheatley, Emma, Neb., 1895, A.
 Wheaton, Ellen F., Minn., 1897, A.
 Wheeler, Henry N., Mass., 1892, A.
 Wheelock, Chas. F., N. Y., 1895, A.
 Wheelock, Lucy, Mass., 1891, A.
 Whipple, H. A., Wis., 1897, A.
 Whitcomb, Arthur K., Mass., 1892, A.
 White, Charles G., Mich., 1895, D.
 White, Mrs., C. G., Mich., 1893, A.
 White, Daniel A., Ill., 1895, A.
 White, Emerson E., Ohio, 1870, D.
 White, J. U., Mo., 1887, A.
 White, R. Mabel, Ill., 1895, A.
 White, W. J., Ohio, 1891, A.
 White, W. S., Mich., 1897, A.
 White, W. T., Tenn., 1889, A.
 Whitehead, Mrs. K., N. Y., 1896, A.
 Whiteford, J. A., Mo., 1895, A.
 Whitford, William C., Wis., 1884, L.
 Whitman, B. L., D. C., 1895, A.
 Whitney, Allen S., Mich., 1894, A.
 Whitney, M. A., Ill., 1891, A.
 Whitney, S. Emory, Mich., 1893, A.
 Whittmore, Henry, Mass., 1895, A.
 Whittle, W. R., R. I., 1896, A.
 Wickham, Kate M., Neb., 1895, A.
 Wicks, John F., Ill., 1897, A.
 Widner, Esther A., Ohio, 1880, L.
 Wiley, Wm. H., Ind., 1896, A.
 Wilkins, A. H., Tex., 1894, A.
 Wilkinson, Geo. E., Kan., 1893, A.
 Wilkinson, J. J., Kan., 1896, A.
 Wilkinson, J. N., Kan., 1884, A.
 Wilard, F. E., Iowa, 1896, A.
 Willett, Emma, Wis., 1897, A.
 Williams, Mrs. Delia, Ohio, 1870, L.
 Williams, Ella D., Iowa, 1897, A.
 Williams, J. D., Ill., 1896, A.
 Williams, Philo J., Kan., 1886, L.
 Williams, Samuel C., N. Y., 1891, A.
 Williams, T. E., Ga., 1895, A.
 Williams, Wm. H., Wis., 1897, A.
 Williams, Wm. J., Neb., 1895, A.
 Williamson, J. E., Iowa, 1895, A.
 Willis, D. M., W. Va., 1895, A.
 Willis, H. B., N. J., 1892, A.
 Willis, W. A., Iowa, 1884, L.
 Wilson, A. H., N. J., 1896, A.
 Wilson, Harry G., Ill., 1896, A.
 Wilson, H. E., Kan., 1895, A.
 Wilson, J. Ormond, D. C., 1880, D.
 Wilson, Stella S., Ohio, 1895, A.
 Wilson, V. L., Iowa, 1897, A.
 Wilson, William E., R. I., 1890, A.
 Winchell, Harriet N., Ill., 1895, A.
 Wing, Jessie, Colo., 1895, A.
 Winne, James, N. Y., 1892, A.
 Winship, Albert E., Mass., 1892, A.

Winston, Geo. T., Tex., 1896, A.
 Winterton, Jessie M., N. Y., 1897, A.
 Wise, Henry A., Md., 1885, A.
 Wise, W. J., Colo., 1895, A.
 Witchard, J. H., Ga., 1896, A.
 Wittmer, Chas. K., Pa., 1894, A.
 Witter, F. M., Iowa, 1897, A.
 Wolfe, H. K., Neb., 1896, A.
 Wolfe, L. E., Mo., 1890, A.
 Wood, Court F., D. C., 1897, A.
 Wood, Emory M., Kan., 1889, A.
 Wood, J. A., N. Mex., 1897, A.
 Wood, O. M., Mo., 1893, A.
 Woodley, O. I., Mich., 1896, A.
 Woods, Francis M., Ill., 1896, A.
 Woodward, C. F., Iowa, 1897, A.
 Woodward, C. M., Mo., 1887, A.
 Woody, H. G., Ind., 1893, A.
 Wooley, L. C., N. J., 1893, A.

Worden, Mrs. E. D., Kan., 1897, A.
 Worthington, John D., Md., 1893, A.
 Wright, A. M., N. Y., 1893, A.
 Wright, Anna J., Ohio, 1894, A.
 Wright, Edmund W., Vt., 1889, L.
 Wright, L. L., Mich., 1896, A.
 Wright, Marion L., Wis., 1896, A.
 Wright, Wm. R., N. J., 1892, A.
 Wylie, Mrs. M. J. B., N. Y., 1891, L.
 Yerby, John D., Ala., 1895, A.
 Yoder, A. H., Ind., 1896, A.
 Young, Geo. C., Utah, 1892, A.
 Young, J. B., Iowa, 1896, A.
 Young, J. S., Colo., 1895, A.
 Young, Nathan B., Ga., 1896, A.
 Young, Robert G., Ill., 1889, A.
 Zillatro, Margaret C., Pa., 1896, A.
 Zimmerman, Chas. F. A., Wis., 1895, A.
 Zook, Mrs. Laura, Mont., 1897, A.

CLASSIFIED MEMBERSHIP BY STATES
IN THE
NATIONAL EDUCATIONAL ASSOCIATION
FOR THE YEAR 1897—(MILWAUKEE MEETING).

State or Territory	Active Membership				Associate Membership	Total Membership
	Life Directors	Life Members	Active Members	Total Active Membership		
Total,	39	142	1,674	1,857	5,253	7,111
North Atlantic Division,	10	24	452	486	456	942
South Atlantic Division,	4	7	70	81	91	172
South Central Division,	2	2	87	91	213	304
North Central Division,	19	97	939	1,055	4,260	5,315
Western Division,	4	12	124	140	226	366
Foreign, . . . . .	..	..	5	5	7	12
North Atlantic Division.						
Maine, . . . . .	..	..	4	4	3	7
New Hampshire, . . . . .	..	..	..	..	6	6
Vermont, . . . . .	..	1	3	4	11	15
Massachusetts,	2	3	84	89	70	159
Rhode Island,	1	..	14	15	8	23
Connecticut,	1	1	14	16	8	24
New York,	5	11	201	217	194	411
New Jersey, . . . . .	..	2	68	70	40	110
Pennsylvania,	1	6	64	71	116	187
South Atlantic Division.						
Delaware, . . . . .	..	..	4	4	4	8
Maryland, . . . . .	..	1	9	10	21	31
District of Columbia,	3	3	13	19	38	57
Virginia, . . . . .	..	..	6	6	4	10
West Virginia,	1	..	11	12	4	16
North Carolina, . . . . .	..	1	3	4	..	7
South Carolina, . . . . .	..	1	3	4	3	7
Georgia, . . . . .	..	1	17	18	12	30
Florida, . . . . .	..	..	4	4	5	9
South Central Division.						
Kentucky, . . . . .	..	2	23	25	73	98
Tennessee,	2	..	7	9	16	25
Alabama, . . . . .	..	..	15	15	10	25
Mississippi, . . . . .	..	..	6	6	13	19
Louisiana, . . . . .	..	..	9	9	33	42
Texas, . . . . .	..	..	14	14	27	41
Arkansas, . . . . .	..	..	11	11	30	41
Oklahoma, . . . . .	..	..	2	2	9	11
Indian Territory, . . . . .	..	..	..	..	2	2
North Central Division.						
Ohio,	3	16	118	137	220	357
Indiana,	1	3	60	73	132	205
Illinois,	6	8	240	254	531	785
Michigan,	2	..	60	62	265	327
Wisconsin, . . . . .	..	39	126	165	1,705	1,870
Iowa,	1	3	74	78	465	543
Minnesota,	1	2	83	86	247	333
Missouri,	2	3	62	67	278	345
North Dakota, . . . . .	..	..	13	13	40	53
South Dakota, . . . . .	..	..	10	10	108	118
Nebraska, . . . . .	..	4	45	49	202	251
Kansas,	3	19	38	60	127	187
Western Division.						
Montana, . . . . .	..	1	14	15	64	79
Wyoming, . . . . .	..	..	6	6	4	10
Colorado,	1	1	46	48	98	146
New Mexico, . . . . .	..	..	7	7	14	21
Arizona, . . . . .	..	..	2	2	4	6
Utah, . . . . .	..	..	10	10	13	23
Nevada, . . . . .	..	..	2	2	1	3
Idaho, . . . . .	..	..	3	3	3	6
Washington, . . . . .	..	1	6	7	1	8
Oregon,	1	1	5	7	..	7
California,	2	8	22	32	24	56
Alaska, . . . . .	..	..	1	1	..	1
Canada, . . . . .	..	..	3	3	5	8
Mexico, . . . . .	..	..	1	1	1	2
Hungary, . . . . .	..	..	1	1	..	1
Japan, . . . . .	..	..	..	..	1	1

RECORD OF MEMBERSHIP BY STATES

IN THE

NATIONAL EDUCATIONAL ASSOCIATION

FOR EACH YEAR FROM 1884-97, INCLUSIVE,

Excepting for 1893, when no regular meeting was held. Bold-face numbers show membership from the state in which the meeting for the year was held.

State or Territory	Madison	Saratoga	Topeka	Chicago	San Francisco	Nashville	St. Paul	Toronto	Saratoga	Aubury Park	Denver	Buffalo	Milwaukee	Total	Average Membership
	1884	1885	1886	1887	1888	1889	1890	1891	1892	1894	1895	1896	1897	...	.....
Total,	2,729	625	1,197	9,115	7,216	1,984	5,474	4,778	3,360	5,915	11,297	9,078	7,111	69,873	5,375
North Atlantic Division,	792	406	386	773	803	101	795	426	1,187	1,711	1,462	2,940	942	12,724	979
South Atlantic Division,	77	16	31	44	113	128	95	151	309	271	289	237	172	1,933	149
South Central Division,	111	19	48	370	216	1,074	261	417	253	460	899	419	304	4,850	373
North Central Division,	1,712	176	708	7,671	1,074	642	4,156	2,933	1,450	3,357	7,211	5,083	5,315	41,496	3,192
Western Division,	26	7	25	102	4,974	38	122	196	104	73	1,403	377	366	7,813	601
Foreign,	11	1	..	155	36	1	45	655	51	43	33	16	12	1,059	88
North Atlantic Division,															
Maine,	21	2	5	25	11	..	32	30	10	5	24	7	7	179	15
New Hampshire,	64	6	10	33	11	..	32	9	5	7	27	8	6	208	17
Vermont,	43	8	3	41	4	..	40	4	20	4	13	14	15	209	17
Massachusetts,	310	145	85	277	206	28	290	114	212	52	191	197	159	2,266	174
Rhode Island,	50	13	13	29	30	4	31	42	23	12	55	35	23	350	27
Connecticut,	40	18	23	36	48	4	31	18	63	13	26	43	24	377	29
New York,	143	159	91	211	210	20	228	117	611	326	521	2,132	411	5,192	399
New Jersey,	40	27	35	23	41	13	12	16	65	969	168	179	110	1,698	131
Pennsylvania,	81	28	121	108	242	23	99	76	178	323	437	325	187	2,228	171
South Atlantic Division,															
Delaware,	1	..	4	..	3	1	2	5	6	8	17	11	8	66	6
Maryland,	5	..	10	8	17	3	7	13	40	45	53	23	31	265	20
District of Columbia,	30	1	7	12	32	13	21	10	35	24	47	20	57	321	25
Virginia,	6	4	3	2	18	2	8	2	24	36	21	10	10	147	11
West Virginia,	15	3	3	8	6	6	27	49	20	37	49	52	16	290	22
North Carolina,	3	2	..	2	8	12	2	13	17	15	5	14	4	99	8
South Carolina,	5	4	1	2	13	22	4	18	14	52	1	31	7	171	13
Georgia,	11	1	2	10	16	43	23	31	163	64	62	43	30	499	38
Florida,	1	1	1	..	..	16	7	4	3	2	19	13	9	75	8
South Central Division,															
Kentucky,	33	2	8	151	22	114	39	57	42	128	176	77	98	947	72
Tennessee,	12	6	5	62	83	607	97	124	57	124	66	57	25	1,325	102
Alabama,	9	1	1	16	45	123	35	79	51	41	41	59	25	526	40
Mississippi,	7	1	2	7	10	87	44	42	36	20	49	25	19	349	27
Louisiana,	3	7	8	11	7	19	13	25	21	35	108	25	42	324	25
Texas,	22	1	15	55	29	89	20	53	9	82	294	99	41	809	62
Arkansas,	22	..	8	67	12	29	12	34	33	25	84	63	41	427	36
Oklahoma,	..	..	..	..	..	..	..	..	..	4	58	14	11	87	21
Indian Territory,	3	1	..	1	8	6	1	3	4	1	23	..	2	53	5
North Central Division,															
Ohio,	121	43	67	581	225	60	361	355	178	990	592	565	357	4,495	346
Indiana,	54	15	46	418	71	89	206	149	65	258	321	250	205	2,147	165
Illinois,	354	33	164	1,750	222	204	625	666	274	871	1,495	1,774	785	8,555	648
Michigan,	77	12	20	273	40	29	137	259	285	155	204	589	127	2,407	185
Wisconsin,	546	18	18	486	57	28	443	222	72	143	188	413	1,870	4,504	346
Iowa,	304	18	87	1,146	96	67	572	278	110	164	1,086	578	543	5,049	388
Minnesota,	132	9	11	649	58	16	933	118	54	86	193	303	333	2,895	223
Missouri,	46	11	73	625	133	68	249	390	189	435	1,113	406	285	3,953	304
North Dakota,	23	1	5	149	8	7	99	32	16	8	28	34	53	911	70
South Dakota,	..	..	..	..	..	..	109	31	20	9	78	83	118	..	..
Nebraska,	39	5	27	634	40	10	147	220	126	127	742	363	251	2,731	210
Kansas,	16	11	190	90	124	64	275	283	127	111	1,171	325	187	3,844	296
Western Division,															
Montana,	3	1	1	9	4	5	37	24	9	3	15	43	78	232	18
Wyoming,	1	2	2	8	8	..	5	13	4	2	48	7	10	110	9
Colorado,	12	2	11	40	100	8	56	114	59	58	1,136	177	145	1,927	148
New Mexico,	..	..	..	2	26	2	1	7	5	..	26	16	21	106	22
Arizona,	..	..	..	1	45	1	1	..	2	2	11	6	6	75	8
Utah,	..	..	..	4	127	..	..	10	8	4	89	37	22	305	31
Nevada,	1	..	..	6	134	..	1	..	..	..	2	5	3	153	19
Idaho,	..	..	..	..	12	..	..	..	1	1	3	10	6	34	5
Washington,	1	..	1	3	27	1	6	18	1	2	6	16	8	90	8
Oregon,	3	1	1	11	204	8	7	5	..	14	9	7	7	275	23
California,	5	..	4	18	4,278	13	8	5	10	2	53	51	50	4,502	375
Miscellaneous,	11	..	..	143	16	..	..	5	3	2	1	2	5	188	21
Canada,	..	1	..	12	20	1	45	650	48	41	32	14	8	872	79

**INVENTORY AND PRICE LIST OF PUBLICATIONS OF THE NATIONAL
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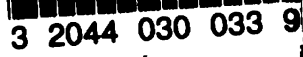
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